September 17, 1941

# NATIONAL PETROLEUM NEWS

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SEP 18 1941
DETROIT

## Decision Voiding The Infringement Of Early Cracking Patent Upheld

U. S. Court of Appeals in Oklahoma Affirms the Judgment of the District Court, in Suit of The Texas Co. against Anderson-Prichard Limiting the Valid Cracking Process Claims of the Basic Behimer Patent.....24

## New Lubricating Oil Test Methods Indicate Service Characteristics

Laboratory Procedures Announced at the Meeting of the Petroleum Division of American Chemical Society, in Some Cases, Offer Means for Relating Test Results to Performance.....R-291

## Improvement in 'Third-Grade' in 6 Years Outstrips Regular and Premium Fuels

Greater Increases in Octane Ratings of Winter Third Grade Gasoline, in this Period, and Reductions in Temperatures in Early Distillation Range, are Shown in Latest Bureau of Mines Survey.....R-303

## NEWS IN BRIEF

**Refining, transporting and producing get blanket A-10 priority rating for equipment maintenance and repair materials. Page 22.**

* * *

**N.G.A.A. creates new division for study of technical problems in high pressure gas operations. Page 21.**

* * *

**Maloney committee finds "no shortage" of oil in East, but PCO's plans are unchanged. Page 11.**

**U. S. Army standardizes on 6 lubricating oils. Similar simplification is expected soon for greases. Page 19.**

* * *

**Justice Department expects early settlement of Elkins Act pipeline cases. Page 11.**

* * *

**PCO names 15 men to district oil committees, including 4 refining members. Page 13.**

# REFINING TECHNOLOGY EDITION

# SPEEDY

## GASOLINE TIGHT HOSE CONNECTIONS

Defense demands of today include conservation of time and materials. Morrison Quick Detachable Couplings, through their lightning quick and gasoline tight action, save both valuable time and petroleum products. Arrange now to equip your truck tanks with Morrison Quick Detachable Couplings.

Fig. 277-A

Fig. 245-B

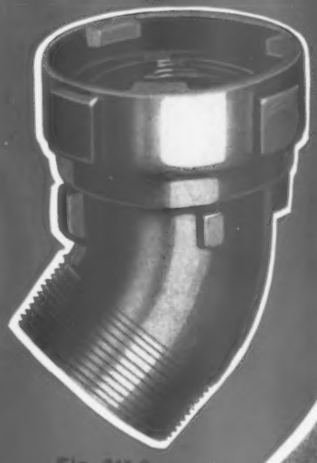


Fig. 245-C

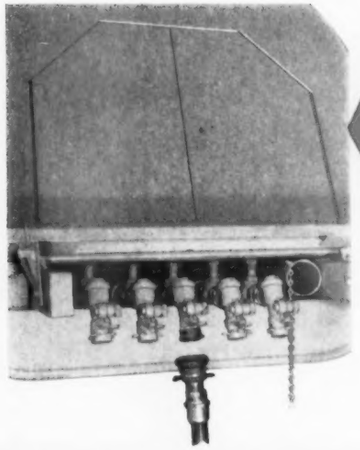


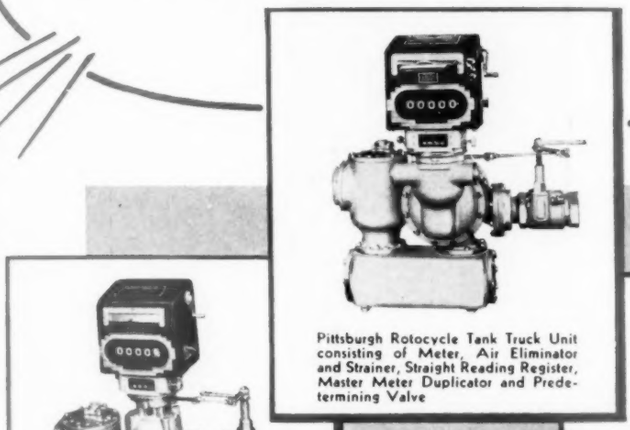
Fig. 245

**MORRISON BROS. COMPANY**

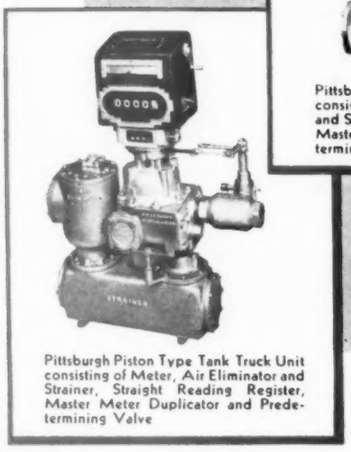
*OIL EQUIPMENT HEADQUARTERS*

DUBUQUE, IOWA

# *We're in the*
# WAR on WASTE

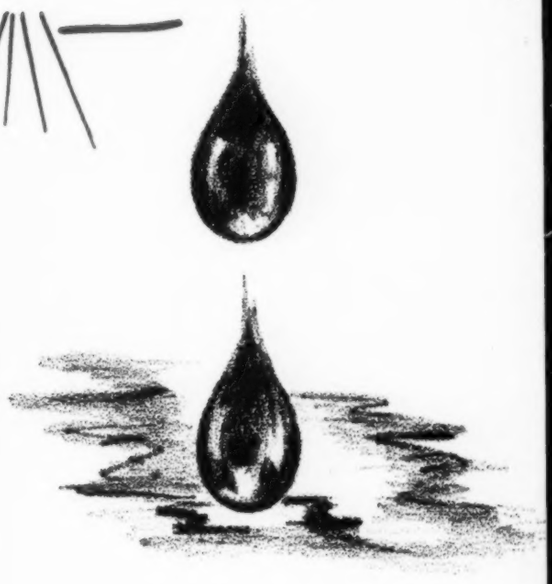


Pittsburgh Rotocycle Tank Truck Unit consisting of Meter, Air Eliminator and Strainer, Straight Reading Register, Master Meter Duplicator and Predetermining Valve

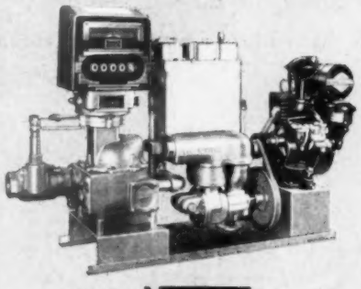


Pittsburgh Piston Type Tank Truck Unit consisting of Meter, Air Eliminator and Strainer, Straight Reading Register, Master Meter Duplicator and Predetermining Valve

Pittsburgh Rotocycle Bulk Plant Meter with Full Vision Straight Reading Register



# PITTSBURGH OIL AND GASOLINE METERS



**PUMP N METER**
**PITTSBURGH EQUIPPED**

The PUMP-N-METER, a compact, easy to install tank truck unit, uses the PITTSBURGH PISTON METER to assure accurate, dependable measurement. It replaces old-fashioned "bucketing" with speedy, clean and accurate metered delivery. The unit is powered by its own gasoline motor and has nozzle control. The PUMP-N-METER way not only saves time but also builds consumer confidence and increases sales. Request information from the Pump & Meter Manufacturing Co., 1721 East 39th St., Cleveland, Ohio.

PETROLEUM marketers are faced with the serious problem of supplying increased demands from diminishing supplies. The very commendable attitude taken by the industry in its "War on Waste" campaign should bring home to consumers the fact that untold millions in heat and power can be conserved by the proper utilization of these fuels.

In the handling of petroleum products there is a definite place for a "War on Waste" campaign, too. Bulk station outages, inaccurately calibrated tanks, hit or miss gauge stick measurements, leaks, spillage and petty frauds all come under the head of waste. Accurate measurement by meter of all deliveries provides the knowledge upon which wasteful distribution can be stopped. Whether for pipe-lines, bulk plants or tank trucks, there's a PITTSBURGH METER properly engineered and built to accurately and speedily handle the service.

**PITTSBURGH EQUITABLE METER COMPANY**

NEW YORK · BROOKLYN · DES MOINES · MEMPHIS · DALLAS · TULSA · CHICAGO · BOSTON · KANSAS CITY · PHILADELPHIA · SAN FRANCISCO · LOS ANGELES · SEATTLE · HOUSTON · COLUMBIA · BUFFALO

MERCO NORDSTROM VALVE COMPANY
Main Offices, Pittsburgh, Pa.
NATIONAL METER DIVISION, Brooklyn, N. Y.

THE WORLD'S LARGEST MANUFACTURER OF GASOLINE, OIL, AND GREASE METERS

FIG. 439
DOUBLE POPPET
FOOT VALVE

# ALWAYS DEPENDABLE

As foot valves are installed deep underground they MUST be *dependable*. It is the *dependability* of Buckeye Foot Valves that have made them the choice of thousands of construction engineers and service station owners everywhere.

The famous Fig. 439 is an all-brass Foot Valve. One outstanding feature of this valve is its *flat* seats and *flat* discs which are carefully machined to a smooth surface and then finished by a special process. The discs or poppets are machined to a mirror-like surface and then lapped carefully to the seats by hand.

Buckeye makes many other foot valves, in various sizes, such as single poppet, composition disc, and others with special strainers.

● *The COMPLETE Buckeye Line of Valves and Fittings for service stations and bulk plants is known and used "from border to border and coast to coast." It is fully described in our Catalog No. 11. Write us for your free copy TODAY.*

**BUCKEYE IRON & BRASS WORKS**
**356 E. Third Street, Dayton, Ohio**
**1203 Santa Fe Building, Dallas, Texas**
**DISTRIBUTORS IN ALL PRINCIPAL CITIES**

*Buckeye* QUALITY FITTINGS

## COMING MEETINGS

**SEPTEMBER**

**Society of Automotive Engineers,** National Tractor Meeting, Schroeder Hotel, Milwaukee, Wis., Thurs.-Fri., Sept. 25-26.

**New Jersey Oil Trade Assn.,** Fall Golf Outing and Dinner, Braidburn Country Club, Madison, N. J., Thursday, Sept. 25.

**Michigan Petroleum Assn.,** Fall Convention, Park Place Hotel, Traverse City, Mich., Thurs.-Fri., Sept. 25-26.

**National Lubricating Grease Institute,** 9th Annual Meeting, Stevens Hotel, Chicago, Ill., Mon.-Tues., Sept. 29-30.

**OCTOBER**

**West Virginia Oil & Natural Gas Assn.,** Annual Convention, Clarksburg, W. Va., Wed.-Thurs., Oct. 2-3.

**Western Petroleum Refiners Assn.,** Regional Technical Meeting, Allis Hotel, Wichita, Kans., Fri., Oct. 3.

**Thirteenth Boston Conference on Distribution,** Hotel Statler, Boston, Mass., Mon.-Tues., Oct. 6-7.

**Twenty-Eighth National Foreign Trade Convention,** Hotel Pennsylvania, New York, Mon.-Wed., Oct.6-8.

**National Safety Congress,** Stevens Hotel, Chicago, Ill., Mon.-Thurs., Oct. 6-9.

**Texas Mid-Continent Oil & Gas Assn.,** Beaumont, Tex., Tues.-Thurs., Oct. 9-11.

**American Society of Mechanical Engineers,** Fall Meeting, Brown Hotel, Louisville, Ky., Sun.-Wed., Oct. 12-15.

**National Dixie Distributors, Inc.,** Hotel Morrison, Chicago, Ill., Mon.-Tues., Oct. 13-14.

**National Oil Marketers Assn.,** Hotel Morrison, Chicago, Ill., Mon.-Tues., Oct. 13-14.

**Indiana Independent Petroleum Assn.,** Fall Convention, Hotel Severin, Indianapolis, Ind., Tues.-Wed., Oct. 14-15.

**Virginia Petroleum Jobbers Assn.,** Fall Convention, Patrick Henry Hotel, Roanoke, Va., Thurs., Oct. 16.

**American Assn. of Petroleum Geologists,** Pacific Section, Los Angeles, Calif., Thurs.-Fri., Oct. 16-17.

**Western Petroleum Refiners Assn.,** Regional Technical Meeting, Washington-Youree Hotel, Shreveport, La., Fri., Oct. 17.

**Virginia Oil Men's Assn., Fall Convention, Hotel Roanoke,** Roanoke, Va., Fri., Oct. 17.

**American Institute of Mining & Metallurgical Engineers,** Petroleum Division, Dallas, Tex., Thurs.-Sat., Oct. 16-18; Ambassador Hotel, Los Angeles, Calif., Wed.-Thurs., Oct. 29-30.

**National Stripper Well Assn.,** Annual Meeting, Mayo Hotel, Tulsa, Okla., Mon., Oct. 20.

**Independent Petroleum Assn. of America,** 12th annual meeting, Tulsa, Okla., Mon.-Wed., Oct. 20-22.

**Society of Automotive Engineers,** National Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla., Thurs.-Fri., Oct. 23-24.

**Tennessee Oil Men's Assn.,** Fall Convention, Andrew Johnson Hotel, Knoxville, Tenn., Thurs.-Fri., Oct. 23-24.

**Oil Trades Association of New York,** Annual Banquet, Waldorf-Astoria Hotel, New York, Tues., Oct. 28.

**Society of Automotive Engineers,** National Aircraft Production Meeting, Biltmore Hotel, Los Angeles, Calif., Thurs.-Sat., Oct. 30-Nov. 1.

**California Natural Gasoline Assn.,** Los Angeles, Calif., Fri., Oct. 31.

**NOVEMBER**

**American Institute of Chemical Engineers,** 34th annual meeting, Cavalier Hotel, Virginia Beach, Va., Mon.-Wed., Nov. 3-5.

**Society of Automotive Engineers,** West Coast Transportation & Maintenance Meeting, San Francisco, Calif., Wed.-Thurs., Nov. 5-6.

**American Petroleum Institute,** 22nd Annual Meeting, St. Francis and Palace Hotels, San Francisco, Calif., Mon.-Fri., Nov. 3-7.

**Society of Automotive Engineers,** National Transportation & Maintenance Meeting, Statler Hotel, Cleveland, Ohio. Thurs.-Fri., Nov. 13-14.

**DECEMBER**

**New Mexico Oil & Gas Assn.,** Artesia, New Mex., Wed., Dec. 3.

**Oklahoma Stripper Well Assn.,** Tulsa, Okla., Fri., Dec. 5.

**South Dakota Independent Oil Men's Assn.,** 23rd Annual Convention, Aberdeen, S. D., Tues.-Wed., Dec. 9-10.

**JANUARY, 1942**

**Society of Automotive Engineers,** Annual Meeting (and Engineering Display) Book Cadillac Hotel, Detroit, Mich., Mon.-Fri., Jan. 12-16.

**FEBRUARY**

**Iowa Independent Oil Jobbers' Assn.,** Annual Convention, Hotel Fort Des Moines, Des Moines, Ia., Wed.-Fri., Feb. 25-27.

**Texas Oil & Gas Assn.,** Wichita Falls, Tex., Sat., Feb. 28.

# NATIONAL PETROLEUM NEWS

**SEPTEMBER 17, 194**

**NEWS**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**Chicago,** 59 E. Van Buren Street, Telephone, Harrison 5901-2-3.

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## THIS WEEK WITH NPN

### "GET A HORSE"

During the early days of the automobile, "Get a Horse" was a well-known cry, and one Lynchburg, Va., marketer is reviving it. This marketer, operator of a string of service stations in the "restricted" section of the East Coast, has a huge cardboard horse at one of his stations and under the horse a sign reading: "If we run out of gas, we'll loan you our horse." For picture of the marketer and the horse he offers to loan, see page 56.

### VALUABLE COURSE

NPN's issue of August 20 featured the plan of the Indiana Independent Petroleum Assn., in which Oil Men and Educators join in training service station operators. That this plan is attracting widespread attention is shown in an inquiry from an NPN reader in Moose Jaw, Saskatchewan, asking for more information on "this valuable course".

### SUPPLIERS

The East Coast shortage has popularized NPN's "Refinery Directory" which lists refiners of the U. S. One eastern marketer, seeking a new source of supply, ordered a copy some time ago and followed his original order with an airmail special delivery order for an additional copy. NPN has a few copies of this Directory still available at $1 per copy.

### NEW IDEAS

Jobbers will find new ideas for increasing sales and profits in the messages of twelve companies in this issue. Seven others detail quality points of their equipment and services and four others offer equipment and services for service station use.

# SWITCHES TO SINCLAIR AND UPS R
# FROM 28 to 60 IN FIRST YEAR —

UNION STREET GARAGE, Littleton, N. H.
Nash Sales & Service, Thos. Shalsi, prop.

WARREN WHITNEY'S GARAGE, Lancaster, N. H., Oldsmobile Sales & Service.

SQUARE FRONT GARAGE, Groton, Vt., Wm. L. Cassady, operator.

EAST BARRE, VT. STATION, Allen Cameron, operator.

NORTHFIELD, VT. STATION, Rufus Daily, operator.

ST. JOHNSBURY, VT., bulk plant.

CHELSEA, VT. STATION, Frank Nicholl, operator.

PLAINFIELD, VT. station and restaurant, Mr. and Mrs. George Thomas, operators.
*(Exterior and interior views)*

Some units of the New England Oil Burner Fleet.

For full particulars about the value of a Sinclair franchise, write the Sinclair office nearest you.

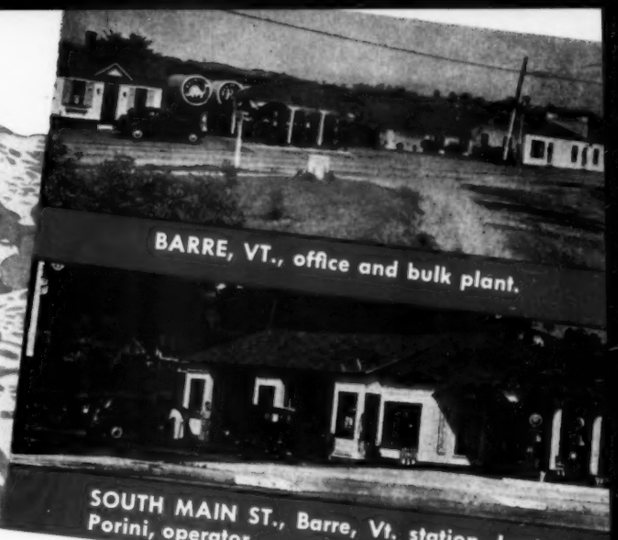
SINCLAIR

SINCLAIR REFINING COMPANY (Inc.) 630 Fifth Avenue, New York, N. Y.

2540 W. Cermak Rd. CHICAGO | 573 W. Peachtree St. ATLANTA | 1907 Grand Ave. KANSAS CITY | Fair Building FT. WORTH | 10 W. 51st St. NEW YORK

# RETAIL OUTLETS

## *This Vermonter is located in Barre—famous as "Granite Headquarters of the World"*



BARRE, VT., office and bulk plant.

SOUTH MAIN ST., Barre, Vt. station, Louis Porini, operator.

Jamie E. Jacobs, President of New England Oil Burner Co.

A Sinclair distributor in the making, Jamie Jay Jacobs.

RANDOLPH, VT. SERVICE STATION, Leon R. Perkins and James Lashway, operators.

TELEPHONE BARRE 1315

THE BILT-RITE

AUTOMATIC OIL BURNERS

QUIET
EFFICIENT
ECONOMICAL
FOOL-PROOF

HOME OFFICE, SOUTH MAIN STREET

NEW ENGLAND OIL BURNER COMPANY

MANUFACTURERS AND DISTRIBUTORS
BARRE, VERMONT

SINCLAIR HC GASOLINE

Sinclair Refining Company
630 Fifth Avenue
New York, N. Y.

June 23, 1941

Dear Sirs:

Attention: Mr. J. M. Woodruff

On the 16th of this month I completed my first year as a Sinclair distributor. I am writing to you now to tell you that this has been one grand year.

You may recall that while my oil burner sales extended from Switzerland to California, my oil business up to a year ago was in a limited territory with one bulk plant in Barre. Today I have three bulk plants and cover most of Vermont and northern New Hampshire. My retail outlets have increased from 28 to 60 and every dealer who switched with me to Sinclair has shown an increase in his business; some show increases of from 600 to 1000 gallons a week.

I was first attracted to Sinclair through your Dinosaur Exhibit at the Chicago World's Fair. At the time I saw this exhibit I also went through your East Chicago refinery and had an opportunity to see your retail distribution in the middle west. Also, when I was on hunting trips through the south I was further impressed with Sinclair distribution along the eastern seaboard. All of these things made me think that one day I might handle Sinclair products but the straw that broke the camel's back was the series of advertisements you have been running in National Petroleum News telling of one distributor after another who has built up a substantial and profitable business handling your products.

I am glad to say that the quality of Sinclair products has made a hit throughout my territory. It is this local acceptance, plus the wide use of Sinclair Credit Cards by tourists, that brings my dealers their increases in volume. I have been in the oil and gasoline business 13 years but this last year is the first time that I have felt really satisfied.

If you have any prospects who want to know about the fairness of Sinclair policies and the popularity of the Sinclair Dinosaur trademark, please refer them to me.

Very cordially yours,

Jamie E Jacobs

# LINCOLN Lubricating Equipment is the finest that money can buy

*- - and it is backed up with*

## COAST-TO-COAST SERVICE

**A MODERN installation of Lincoln Lubricating Equipment makes it easier to turn out better grease jobs in less time at greater profit ... And if the equipment ever needs service, a coast-to-coast service organization cuts lost time to a minimum.**

Illustration above shows an authorized Lincoln Service Department.

## *Authorized Parts and Service Available:*

### ALABAMA
**Birmingham.** Alabama Auto Parts Co.
**Mobile** ..... Central Electric Co.
**Montgomery** .... Parts Service Corp.

### ARIZONA
**Phoenix** ..... Colyear Motor Sales

### ARKANSAS
**Little Rock** ..... Voss-Hutton Co.

### CALIFORNIA
**Fresno** ..... Pioneer Mercantile Co.
**Los Angeles.** Lincoln Eng. Co. of Cal.
**Oakland** .... Lincoln Eng. Co. of Cal.
**Sacramento** ..... Henderson Bros.
**San Diego.** Motor Hdwe. & Equip. Co.

### COLORADO
**Denver** ..... Auto Equipment Co.
**Pueblo.** Motor Accessory & Parts Co.

### CONNECTICUT
**Bridgeport** .... Collins & Leary, Inc.
**Hartford.** Grinold Auto Parts Co., Inc.
**New Haven.** Connecticut Bearings Co.

### FLORIDA
**Miami** ..... Holden-Wood Inc.
**Tampa** .... General Auto Supply Co.

### GEORGIA
**Atlanta** ..... Alexander-Seewald Co.
**Columbus** ..... Butler Brothers Co.
**Savannah** ..... The Frank Corp.

### ILLINOIS
**Champaign** .. Sparks Auto Supply Co.
**Chicago** .... Lincoln Eng. Co. of Ill.
**Decatur** . Fred Campbell Auto Supply
**E. St. Louis** . National Auto Sup. Co.
**Joliet** ..... Barrett Hardware Co.
**Marion** ..... E. Blankenship & Co.
**Moline** ..... F. W. Shattuck
**Rockford** ..... Schacht-Tuck Co.
**Waukegan.** Pickus-Con. & Equip. Co.

### INDIANA
**Indianapolis** ..... The Gibson Co.

### IOWA
**Des Moines** .... Herring Wissler Co.
**Ottumwa** ..... Sieg-Ottumwa Co.

### KANSAS
**Great Bend** . Scheufler Sup. Co. Inc.
**Pratt** ..... Woolwine Supply Co.
**Wichita** . Johnson Bros. Auto Supply

### KENTUCKY
**Louisville**
Kentucky Ignition Co., Inc.

### LOUISIANA
**New Orleans** ..... Rykoski, Inc.

### MAINE
**Bangor** ..... Rice & Miller Co.
**Biddeford** .... Biddeford Auto Parts
**Portland** .... Emery-Waterhouse Co.

### MARYLAND
**Baltimore** ..... J. R. Hunt & Co.

### MASSACHUSETTS
**Boston** ..... H. G. Davis, Inc.
**Holyoke** ..... J. Russell & Co. Inc.
**Lawrence** . Cogan's Auto Supply Co.
**Worcester** ..... Joseph Leavitt

### MICHIGAN
**Detroit** ..... Lincoln Engineering Co.
Detroit Branch
**Detroit** .. Mach. Maint. & Eng. Co.
**Saginaw** . General Distributing Corp.

### MINNESOTA
**Duluth** ..... S. & S. Auto Parts Co.
**Minneapolis** . Minneapolis Iron Store
**St. Paul** ..... Nicols, Dean & Gregg

### MISSISSIPPI
**Jackson** ..... Robinson Brothers
**Meridian** ..... Milton Supply Co.

### MISSOURI
**Joplin** .... Myers Motor Supply Co.
**Kansas City** ..... The Faeth Co.
**Kansas City**
Myers Motor Supply Co.
**St. Joseph** ... Ayers Auto Supply Co.
**St. Louis**
Fred Campbell Auto Supply
**St. Louis** ..... Koochook Co., Inc.
**Springfield** . . Link Motor Supply Co.

### MONTANA
**Bozeman** .... Lovelace Motor Supply
**Havre** ..... Valley Motor Supply Co.

### NEVADA
**Reno** ..... Reno Motor Supply Co.

### NEW HAMPSHIRE
**Franklin** ..... C. A. Dorval Co., Inc.

### NEW JERSEY
**East Orange.** Mfgrs. Equip. Dist., Inc.
**Newark** ..... Air Compressor Service
**Patterson** ..... Ten Hoeve Bros.

### NEW MEXICO
**Albuquerque**
Automotive Warehouse Service

### NEW YORK
**Albany** ..... Detroit Supply Co.
**Binghampton** . United Auto Parts Co.
**Buffalo** . Angert Auto Parts Co. Inc.
**Long Island City.** Mfgrs. Equip. Dist.
**Long Island City.** .. Pearson Brothers
**New York**
Smith & Gregory, N. Y., Inc.
**Rochester** ..... Gordon Motor Parts
**Syracuse** ..... Niles Auto Supply Co.

### NORTH CAROLINA
**Asheville** ..... Hayes & Hopson
**Charlotte** .... Equipment Supply Co.
**Fayetteville**
Motor Bearings & Parts Co.
**Raleigh** . Motor Bearings & Parts Co.
**Sanford** . . Brown's Auto Supply Co.
**Wilmington** . . MacMillan & Cameron

### OHIO
**Akron** ..... W. E. Layman
**Cincinnati** ..... Elmer F. Klayer
**Cleveland** . The Koehler Rubber Co.
**Columbus.** The Penn. Rubber & Sup.
**Dayton** ..... Moore's Equipment Co.
**Youngstown**
Reynolds & Bookout Parts Co.

### OKLAHOMA
**Oklahoma City** . Sharp Auto Sup. Co.
**Tulsa** ..... Kelleher Equip. Co.

### OREGON
**Portland** .... Pioneer Equipment Co.

### PENNSYLVANIA
**Allentown** ..... Allentown Oil Co.
**Kingston** ..... Stull Brothers
**Philadelphia** . Petroleum Equip. Co.
**Pittsburgh** . Mfgrs. Equip. Dist. Inc.
**Reading** ..... E. S. Youse Co. Inc.

### RHODE ISLAND
**Providence** . Mellor's Auto Parts Co.

### SOUTH CAROLINA
**Columbia** . Jenkins Automotive Parts
**Greenville** ..... Scurry & Nixon Inc.
**Spartanburg** . Wallace D. DuPre Co.

### SOUTH DAKOTA
**Sioux Falls.** L & L Motor Supply Co.

### TENNESSEE
**Bristol** ..... Bristol Auto Parts Co.
**Chattanooga** . Hart's Auto. Parts Co.
**Knoxville** ..... Sam Horne Company
**Memphis** ..... Orgill Bros. & Co.
**Nashville** .... Keith-Sinclair Co., Inc.

### TEXAS
**Amarillo** ... McDonald Auto Supply
**Beaumont.** Motor Parts Sup. & Equip.
**Big Spring.** Harry Lester Auto Supply
**Corpus Christi** . Mountjoy Parts Co.
**Dallas** ..... The Schoellkopf Co.
**El Paso** ..... Motor Supply Co.
**Fort Worth** . John Muller Company
**Harlingen** . . Briscoe Motor Parts Co.
**Houston** ..... Jos. F. Meyer Co.
**Houston** . Neumeyer Motor Parts Co.
**Lubbock** ..... Auto Parts Company
**San Angelo** . The Ragsdale Company
**San Antonio.** Auto Parts & Equip. Co.
**Stamford** . Auto Spring & Supply Co.
**Waco** ..... Joe L. Ward
**Wichita Falls.** Auto Spring & Sup. Co.

### UTAH
**Salt Lake City**
Strevell Paterson Hdwe. Co.

### VERMONT
**White River Junction**
Vermont Hdwe. Co. Inc.

### VIRGINIA
**Danville** ..... Auto Specialty Co.
**Lynchburg.** Southern Parts & Bearing
**Norfolk.** McLean Auto Supply Corp.
**Richmond.** . Benj. T. Crump Co. Inc.
**Roanoke.** Shepherd's Auto Supply Co.

### WASHINGTON
**Seattle** ..... Pioneer Equipment Co.
**Spokane** ... Colyear Motor Sales Co.

### WEST VIRGINIA
**Charleston** ... Motor Car Supply Co.

### WISCONSIN
**Milwaukee** ..... Shadbolt & Boyd

### WYOMING
**Casper** ..... Casper Supply Co.

### DISTRICT OF COLUMBIA
**Washington** ..... May Hardware Co.

### DOMINION OF CANADA
**Brandon, Man.** Gillis & Warren Ltd.
**Calgary, Alberta**
Motor Car Supply Co. Ltd.
**Edmonton, Alta.** Motor Car Sup. Co.
**Kitchener, Ontario**
National Automotive Parts Ltd
**Montreal, Quebec**
John Millen & Son
**Ottawa, Ontario** . . Keyes Supply Co.
**Regina, Sask.** ... Bowman Bros. Ltd.
**St. John, N. B.** . . Maritime Acc., Ltd.
**Toronto, Ont.** . . National Auto. Parts
**Vancouver, B. C.**
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1ST LINCOLN LEADS in quality and value

## LINCOLN ENGINEERING COMPANY

*Pioneer Builders of Engineered Lubricating Equipment*

ST. LOUIS, MO., U. S. A.

*It's better to buy Lincoln than to wish you had.*



NATIONAL PETROLEUM NEWS—September 17, 1941—Vol. XXXIII—No. 38

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# STATISTICS

## NPN Gasoline Index

| | Dealer T.W. | Tank Car |
|---|---|---|
| | Cents per Gallon | |
| Sept. 15 | 9.95 | 6.77 |
| Month ago | 9.96 | 6.70 |
| Year ago | 8.79 | 5.12 |

Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is a weighted average of following wholesale markets for regular-grade gasoline, FOB refineries or terminals: Okla., Mid-Western, W. Penna., Calif., N. Y. Harbor, Philadelphia, Jacksonville, Boston, Gulf Coast.

## Pennsylvania Crude Runs

(Compiled by National Petroleum Assn. from reports of all companies that refined Pennsylvania crude. Figures in barrels.)

| Week Ended | Daily Average | Week Ended | Daily Average |
|---|---|---|---|
| Jan. 4 | 60,635 | May 24 | 77,003 |
| Jan. 11 | 71,543 | May 31 | 78,235 |
| Jan. 18 | 75,854 | June 7 | 67,639 |
| Jan. 25 | 74,429 | June 14 | 79,514 |
| Feb. 1 | 74,363 | June 21 | 75,020 |
| Feb. 8 | 75,735 | June 28 | 74,440 |
| Feb. 15 | 73,712 | July 5 | 71,340 |
| Feb. 22 | 71,890 | July 12 | 80,616 |
| Mar. 1 | 68,969 | July 19 | 76,155 |
| Mar. 8 | 65,810 | July 26 | 74,353 |
| Mar. 15 | 76,617 | Aug. 2 | 76,762 |
| Mar. 22 | 73,851 | Aug. 9 | 62,961 |
| Mar. 29 | 73,592 | Aug. 16 | 70,248 |
| Apr. 5 | 75,127 | Aug. 23 | 76,551 |
| Apr. 12 | 72,045 | Aug. 30 | 80,293 |
| Apr. 19 | 76,970 | Sept. 6 | 78,653 |
| Apr. 26 | 79,147 | 1940 Low | 58,516 |
| May 3 | 71,827 | 1940 High | 85,584 |
| May 10 | 72,608 | | |
| May 17 | 73,322 | | |

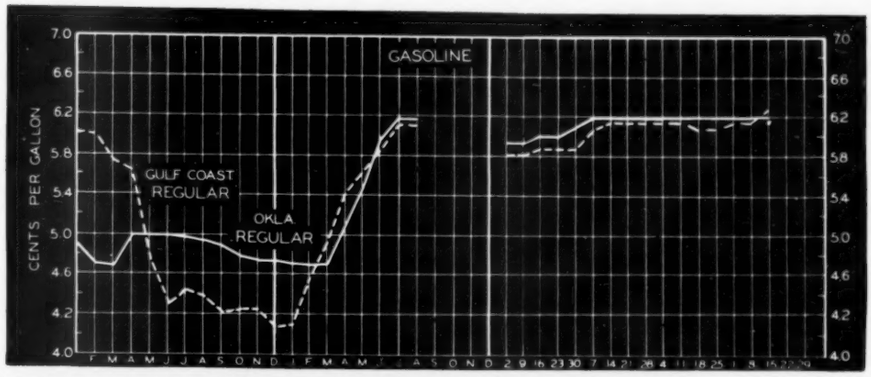
## Dealer & Service Station Gasoline Prices 50 Representative U. S. Cities as of Sept. 1, 1941

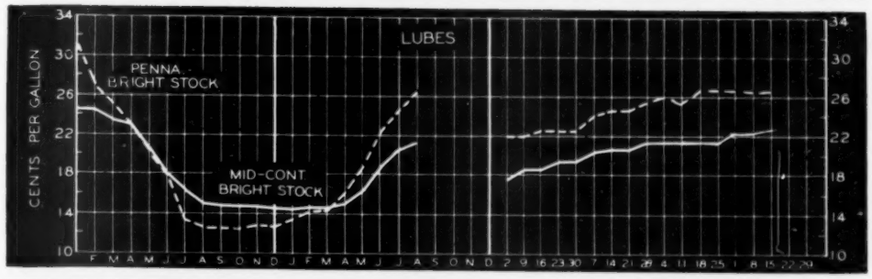
| | Dealers' Net Price (Ex Tax) | Indicated Dealer Margin (Ex Tax) | Gas Tax (Inc. 1.5c Federal Tax) | Service Station (Inc. Tax) |
|---|---|---|---|---|
| | (Cents per Gallon) | | | |
| Portland, Me. | 9.6 | 4.0 | 5.5 | 19.1 |
| Manchester | 10.6 | 4.4 | 5.5 | 20.5 |
| Burlington, Vt. | 10.2 | 3.9 | 5.5 | 19.6 |
| Boston | 9.2 | 4.0 | 4.5 | 17.7 |
| Providence | 9.3 | 4.2 | 4.5 | 18.0 |
| Hartford | 9.9 | 4.1 | 4.5 | 18.5 |
| Buffalo | 9.5 | 4.0 | 5.5 | 19.0 |
| New York | 9.4 | 4.0 | 5.5 | 18.9 |
| Newark | 9 | 4.0 | 4.5 | 17.5 |
| Philadelphia | 9 | 3.5 | 5.5 | 18.0 |
| Dover, Del. | 9.5 | 2 | 5.5 | 17.0 |
| Baltimore | 8.75 | 3.05 | 5.5 | 17.3 |
| Washington | 9 | 3.5 | 3.5 | 16.0 |
| Charleston, W. Va. | 11.05 | 4.05 | 6.5 | 21.6 |
| Norfolk, Va. | 9.25 | 4.55 | 6.5 | 20.3 |
| Charlotte, N. C. | 10.9 | 4.0 | 7.5 | 22.4 |
| Charleston, S. C. | 9.75 | 4.75 | 7.5 | 22.0 |
| Atlanta | 10.5 | 4.0 | 7.5 | 22.0 |
| Jacksonville | 9.5 | 3.0 | 8.5 | 21.0 |
| Birmingham | 10.0 | 4.5 | 8.5 | *23.0 |
| Vicksburg | 9.5 | 5.0 | 7.5 | 22.0 |
| Memphis | 9.75 | 4.75 | 8.5 | 23.0 |
| Lexington | 10.5 | 3.5 | 6.5 | 20.5 |
| Youngstown, O. | 9.5 | 3.0 | 5.5 | 18.0 |
| South Bend | 10.5 | 4.5 | 5.5 | 20.5 |
| Chicago | 9.6 | 3.0 | 4.5 | 17.1 |
| Detroit | 9.9 | 3.74 | 4.5 | 18.14 |
| Milwaukee | 10.6 | 4.3 | 5.5 | 20.4 |
| St. Paul-Minneapolis | 10.4 | 4.0 | 5.5 | 19.9 |
| Fargo, N. D. | 11.4 | 4.0 | 5.5 | 20.9 |
| Huron, S. D. | 10.8 | 3.7 | 5.5 | 20.0 |
| Omaha | 8.9 | 3.0 | 6.5 | 18.4 |
| Des Moines | 8.4 | 3.5 | 4.5 | 16.4 |
| St. Louis | 7.4 | 3.0 | 4.5 | *14.9 |
| Wichita | 8.8 | 3.5 | 4.5 | 16.8 |
| Tulsa | 8.0 | 3.0 | 7.0 | 18.0 |
| Little Rock | 9.5 | 4.5 | 8.0 | 22.0 |
| New Orleans | 8.75 | 4.25 | 8.5 | 21.5 |
| Houston | 8.0 | 4.0 | 5.5 | 17.5 |
| Albuquerque | 10.5 | 4.5 | 7.0 | **22.0 |
| Denver | 10.0 | 4.0 | 5.5 | 19.5 |
| Casper, Wyo. | 11.5 | 5.0 | 5.5 | 22.0 |
| Butte, Mont. | 11.5 | 4.0 | 6.5 | 22.0 |
| Boise, Idaho | 13.5 | 4.0 | 6.6 | 24.1 |
| Salt Lake City | 13.5 | 4.5 | 5.5 | 23.5 |
| Reno, Nev. | 12.0 | 4.0 | 5.5 | 21.5 |
| Phoenix, Ariz. | 12.0 | 4.0 | 6.5 | 22.5 |
| San Francisco | 10.0 | 4.0 | 4.5 | 18.5 |
| Portland | 10.5 | 4.0 | 6.5 | 21.0 |
| Spokane | 12.0 | 4.0 | 6.5 | 22.5 |
| Average 50 Cities | 10.02 | 3.92 | 5.95 | 19.89 |

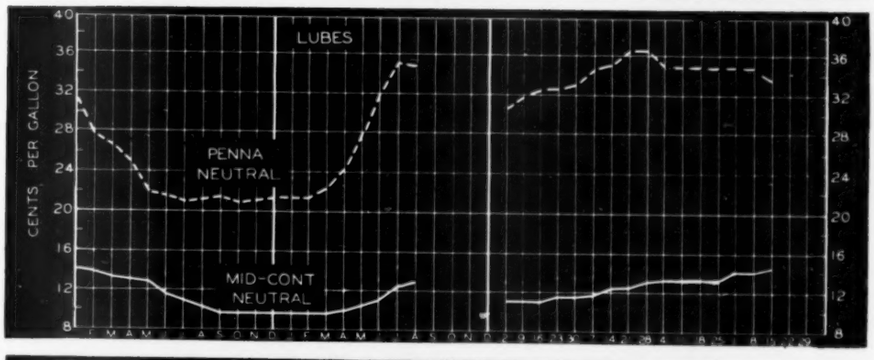
*Includes 1c City Tax. **Includes 0.5c City Tax.

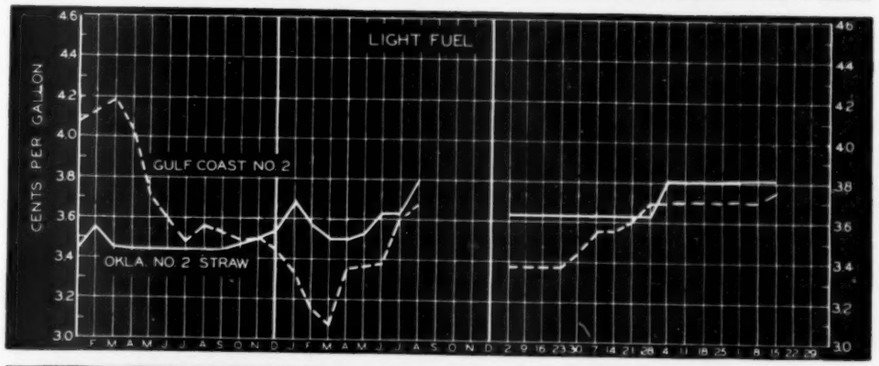
## Refinery Prices

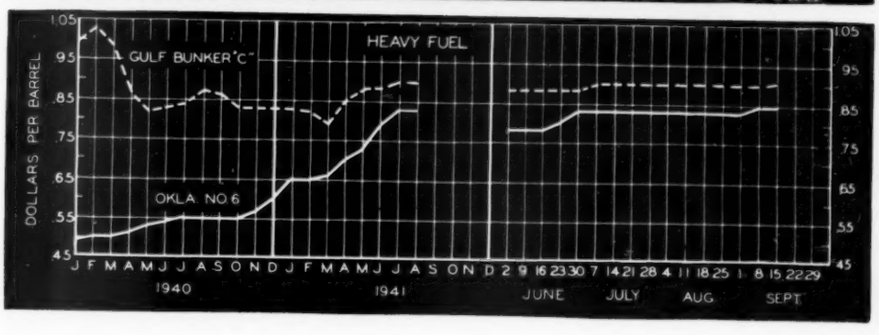
*Monthly prices in graphs are averages of daily high and low prices shown in Platt's Oilgram. Weekly prices are averages of high and low prices shown in Monday Oilgram, and in NPN.*



# LEADING OIL COMPANIES choose and use RAPIDAYTONS because of their

## SIMPLICITY

*Only six gears* operate the entire computing mechanism of a RAPIDAYTON Pump. The entire computer mechanism contains a total of only *one-fifth* as many parts as others.

## VISIBILITY

The dials are large and easy to read. The exact amount of the sale in dollars and cents is plainly visible in its movement to the pointer over a space of several inches.

## LONG LIFE

RAPIDAYTONS can "take it." After long, hard usage under the severest of service conditions, they retain their accuracy, their positive action and their beautiful appearance.

## ACCESSIBILITY

Both the front and rear doors open to full length. All parts are conveniently located and are instantly and completely accessible without removing any other assembly.

## RUGGEDNESS

The chassis is formed of three cast iron horizontal braces anchored to four-member heavy steel support pipes. Constant daily service is assured by Rapidaytons' built-in sturdiness.

# RAPIDAYTON *Computing Pump*

**THE DAYTON PUMP & MFG. CO., DAYTON, OHIO**

# STATISTICS

## Report of Refinery Operations

(American Petroleum Institute Figures in Thousands of Barrels of 42 Gallons each)

| Districts | Daily Average Crude Runs to Stills Week Ended Sept. 13 | Daily Average Crude Runs to Stills Week Ended Sept. 6 | Per Cent of Reporting Capacity Operated Week Ended Sept. 13 | Per Cent of Reporting Capacity Operated Week Ended Sept. 6 | Gasoline Production at Refineries incl. Natural Blended Week Ended Sept. 13 | Gasoline Production at Refineries incl. Natural Blended Week Ended Sept. 6 | Total Stocks Finished & Unfinished Gasoline Week Ended Sept. 13 | Total Stocks Finished & Unfinished Gasoline Week Ended Sept. 6 |
|---|---|---|---|---|---|---|---|---|
| East Coast | 590 | 629 | 89.0 | 93.5 | 1,667 | 1,664 | 19,238 | 19,803 |
| Appalachian | 143 | 137 | 102.9 | 98.6 | 484 | 472 | 3,113 | 3,005 |
| Ind., Ill., Ky. | 658 | 641 | 103.6 | 100.9 | 2,597 | 2,658 | 14,414 | 14,846 |
| Okla., Kans., Mo. | 311 | 317 | 93.4 | 95.2 | 1,246 | 1,230 | 6,748 | 6,815 |
| Inland Texas | 149 | 134 | 89.8 | 80.7 | 696 | 576 | 2,233 | 2,325 |
| Texas Gulf | 1,014 | 955 | 101.5 | 95.6 | 3,157 | 3,030 | 11,447 | 11,029 |
| La. Gulf | 154 | 152 | 104.1 | 102.7 | 420 | 358 | 2,977 | 3,067 |
| N. La., Ark. | 57 | 48 | 121.3 | 102.1 | 174 | 138 | 397 | 401 |
| Rocky Mt. | 66 | 51 | 97.1 | 75.0 | 254 | 233 | 1,019 | 1,021 |
| California | 508 | 579 | 71.0 | 81.0 | 1,420 | 1,659 | 13,569 | 13,759 |
| Reported | 3,659 | 3,643 | 93.3 | 92.9 | 12,115 | 12,018 | 75,155 | 76,071 |
| Estimated Unreported | 351 | 352 | | | 1,345 | 1,335 | 5,400 | 5,500 |
| U. S. Total* | 4,010 | 3,995 | | | 13,460 | 13,353 | 80,555 | 81,571 |
| U. S. Total 9-13-40* | 3,592 | | | | 11,921 | | 82,983 | |

| Districts | Total Stocks Gas Oil & Distillates Week Ended Sept. 13 | Total Stocks Gas Oil & Distillates Week Ended Sept. 6 | Total Stocks Residual Fuel Oil Week Ended Sept. 13 | Total Stocks Residual Fuel Oil Week Ended Sept. 6 | Stocks Aviation Gasoline Included in Finished & Unfinished Gasoline Total Week Ended Sept. 13 | Stocks Aviation Gasoline Included in Finished & Unfinished Gasoline Total Week Ended Sept. 6 |
|---|---|---|---|---|---|---|
| East Coast | 16,418 | 15,671 | 10,241 | 9,498 | | |
| Appalachian | 602 | 577 | 569 | 562 | 654 | 648 |
| Ind., Ill., Ky. | 5,578 | 5,199 | 4,453 | 4,419 | | |
| Okla., Kans., Mo. | 2,039 | 2,050 | 2,016 | 2,040 | 1,322 | 1,329 |
| Inland Texas | 457 | 466 | 1,355 | 1,309 | | |
| Texas Gulf | 6,142 | 6,299 | 8,297 | 8,164 | 3,200 | 3,186 |
| La. Gulf | 1,570 | 1,589 | 2,022 | 1,904 | | |
| N. La., Ark. | 361 | 342 | 426 | 417 | 1,896 | 1,656 |
| Rocky Mt. | 125 | 132 | 403 | 426 | | |
| California | 12,689 | 12,612 | 64,471 | 64,886 | | |
| Reported | 45,981 | 44,937 | 94,253 | 93,625 | 7,072 | 6,819 |
| Estimated Unreported | 1,290 | 1,190 | 1,500 | 1,500 | 380 | 365 |
| U. S. Total* | 47,271 | 46,127 | 95,753 | 95,125 | 7,452 | 7,184 |
| U. S. Total 9-13-40* | 46,556 | | 107,335 | | 5,875 | |

*Estimated, U. S. Bureau of Mines basis.

## Crude Oil Stocks

(Bureau of Mines Figures; Thousands of Barrels)

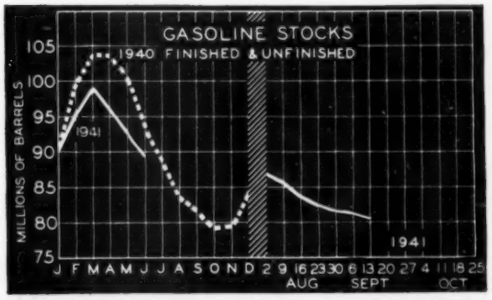
| Grade or Origin | Aug. 23 | Aug. 30 | Sept. 6 | Change from Aug. 30 |
|---|---|---|---|---|
| Pennsylvania Grade | 4,037 | 4,003 | 3,996 | — 7 |
| Other Appalachian | 1,419 | 1,490 | 1,419 | — 71 |
| Lima-Michigan | 1,035 | 1,047 | 954 | — 93 |
| Illinois-Indiana | 18,469 | 18,791 | 19,231 | + 440 |
| Arkansas | 2,265 | 2,359 | 2,454 | + 95 |
| Kansas | 7,725 | 7,929 | 8,020 | + 91 |
| Northern Louisiana | 4,278 | 4,045 | 3,973 | — 72 |
| Gulf Coast Louisiana | 8,245 | 8,332 | 8,528 | + 196 |
| Mississippi | 2,198 | 2,214 | 2,023 | — 191 |
| New Mexico | 7,061 | 7,068 | 7,270 | + 202 |
| Oklahoma | 54,577 | 54,044 | 53,549 | — 495 |
| East Texas | 20,395 | 21,138 | 20,568 | — 570 |
| West Texas | 16,433 | 16,204 | 16,177 | — 27 |
| Gulf Texas | 24,710 | 24,807 | 25,169 | + 362 |
| Other Texas | 22,602 | 22,108 | 21,074 | —1,034 |
| Rocky Mountain | 16,121 | 16,237 | 16,145 | — 92 |
| California | 34,851 | 34,896 | 34,586 | — 310 |
| Foreign | 2,489 | 2,701 | 2,392 | — 309 |
| Total United States refinable | 248,910 | 249,413 | 247,528 | —1,885 |
| Heavy in California | 10,801 | 10,868 | 10,363 | — 505 |
| East Coast—refinery and transit | 13,644 | 12,834 | 13,135 | + 301 |
| East Coast—pipe line (estimated) | 550 | 550 | 575 | + 25 |
| Total | 14,194 | 13,384 | 13,710 | + 326 |

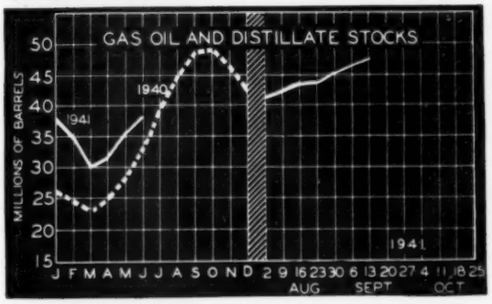
## Crude Oil Production

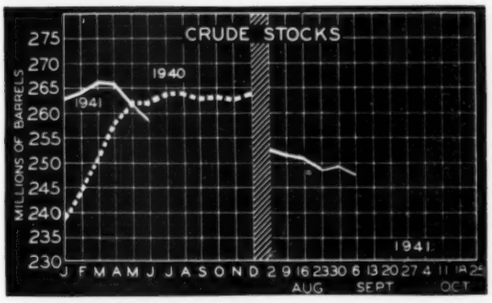
(American Petroleum Institute figures)

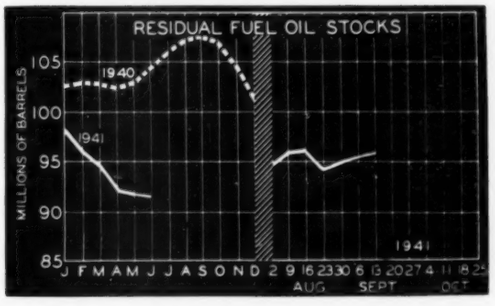
| | Week Ended Sept. 13 Barrels (Daily Average) | Week Ended Sept. 6 Barrels (Daily Average) |
|---|---|---|
| Oklahoma | 417,100 | 438,450 |
| Kansas | 244,050 | 229,400 |
| Nebraska | 7,350 | 7,300 |
| Texas | 1,466,600 | 1,252,950 |
| Louisiana | 335,750 | 333,850 |
| Arkansas | 75,600 | 75,100 |
| Mississippi | 53,600 | 53,450 |
| Illinois | 394,050 | 406,000 |
| Indiana | 19,700 | 21,050 |
| Eastern (Ill. & Ind. excl.) | 92,900 | 89,900 |
| Michigan | 51,850 | 49,850 |
| Wyoming | 83,500 | 77,050 |
| Montana | 20,550 | 20,400 |
| Colorado | 4,850 | 5,050 |
| New Mexico | 113,750 | 113,750 |
| California | 652,500 | 641,400 |
| Total U. S. | 4,033,700 | 3,814,950 |
| Crude Imports | 161,285 | 138,000 |
| Total New Supply | 4,194,985 | 3,952,950 |

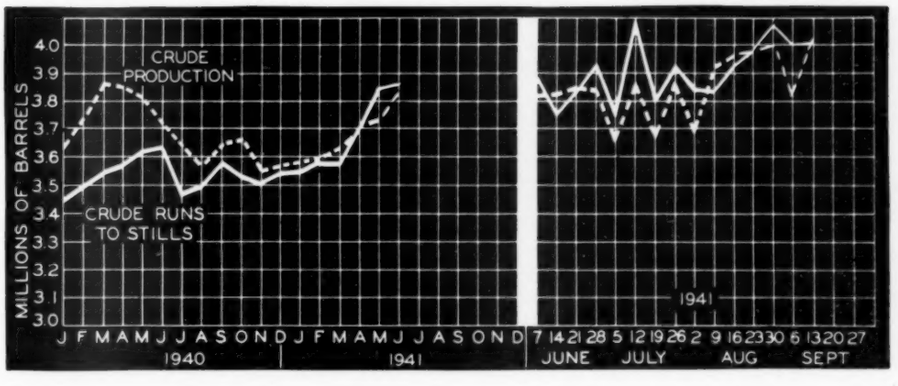
*Monthly figures are actual as reported by Bureau of Mines. Weekly figures are as estimated by American Petroleum Institute on Bureau of Mines basis, except crude stocks which are as reported by Bureau of Mines.*



## New Vice-President of N.G.A.A.

E. E. DeBack

HUNTING wild Javelina hogs in the mesquite country of southern Texas is the pastime of E. E. DeBack, newest vice-president of Natural Gasoline Assn. of America.

As president of American Recycling Assn., Mr. DeBack had taken the leading part in planning a research program into high pressure gas problems and now with consolidation of A.R.A. with N.G.A.A. last week, he will head N.G.A.A.'s high pressure gas division.

"It's hard to figure out what my next best hobby is, unless it's hunting bob cats and deer," Mr. DeBack says.

Born at Watsonville, Calif., in 1899, the new vice-president received his degree in mechanical engineering from Stanford University, completing work on his master's degree at Massachusetts Institute of Technology.

He is general manager of the Chicago Corp. and Coastal Recycling Corp. and is active in operating the Gulf Plains Corp., Stratton Pipe Line Corp. and Stratton Drilling Co.

Mr. DeBack is married and has a 16-year-old daughter who resides at his Corpus Christi, Tex., home.

# NATIONAL PETROLEUM NEWS

VOLUME 33 WEDNESDAY, SEPTEMBER 17, 1941 NUMBER 38


## Jobber Curtailment Varies with Majors

CLEVELAND, Sept. 15. — Asked by NPN if it was curtailing gasoline deliveries in September to its Atlantic Coast jobbers, distributors and other wholesale accounts which resell, one major company replied that "in accordance with the request of the Petroleum Co-ordinator's Office, we are supplying our distributors in District No. 1 with 85% of their July consumption." Other major companies replying said they were curtailing such accounts to 90% of July takings.

### Propose Cancellation Of Special Oil Rates

TULSA, Sept. 15—Southwestern Freight Bureau would cancel out all special commodity rates on petroleum oil residuum, refinery cracking stock and topped or reduced petroleum shipped from, to and between points in the Southwest.

Proposal says the number of special rates has multiplied by leaps and bounds to the point where revenue losses have been chalked up. Preponderance of special rates threatens to nullify the general basis of rates on low grade oils set by ICC.

## WASHINGTON BULLETINS

### SPAB TO INVESTIGATE DEFENSE LINE NEEDS

**WASHINGTON — Supply Priorities and Allocation Board today authorized an investigation to see if necessary pumps, valves, motors and other accessories can be produced fast enough to be ready for use in event seamless steel tubing is used in proposed crude pipeline from East Texas to New York and Philadelphia. SPAB also reaffirmed its Sept. 9 action, refusing priorities on plate steel for this line. First formal application for steel priorities for this pipeline project was presented to SPAB today by Deputy Petroleum Co-ordinator Davies.**

### DAVIES IS NPA SPEAKER

**WASHINGTON—Petroleum Co-ordinator Ickes will not address Atlantic City meeting of National Petroleum Assn. Sept. 17 as previously announced, his office stated today. Deputy Petroleum Co-ordinator Davies will address the meeting instead, PCO said.**

### Oil Taxes Rejected In Revenue Bill

NPN News Bureau

WASHINGTON, Sept. 15. —Treasury proposals for increasing the federal gasoline tax and a downward revision of the depletion allowance on oil wells have been rejected by both the House and the Senate, in approving the $3,500,000,000 revenue bill.

One-cent increase in the gasoline tax and the scaling down or total elimination of the depletion allowance were urged during the congressional hearings on the tax bill by Treasury Secretary Morgenthau and Assistant Treasury Secretary Sullivan.

## 'D. J.' Visions End Of Pipeline Suits

*By Teletype*
NPN News Bureau

WASHINGTON, Sept. 16—Settlement of pending Elkins Act pipeline suits within a week was expected at Justice Department today, as Charles I. Thompson, counsel for Atlantic Refining Co., met with Justice officials. Mr. Thompson heads a group of oil company lawyers attempting to settle Elkins cases.

Basis for proposed pipeline settlement is: Oil companies investing in pipelines shall be allowed a 7% return. Nothing shall be done to change rights of pipelines under Cole Pipeline Bill. Justice Department is still free to seek pipeline divorcement in the pending "Mother Hubbard" suit.

Plans for the settlement contemplate dismissal by Justice Department of Elkins Act suits against Great Lakes Pipe Line Co., Phillips Petroleum Co., and Indiana Standard, and filing of a new substitute suit involving some 100 pipeline companies.

Proposed complaint drafted for filing in new suit covers National Defense pipelines which have been granted right of eminent domain by President Roosevelt under the Cole Pipeline Act, as well as other pipeline common carriers. Natural gas pipelines are not involved in complaints.

Proposed final judgment has also been drafted in the substitute suit and this would be filed with the court either on the same day as the complaint, or shortly thereafter.

#### Based on 7% Return

Final judgment is based on theory that oil companies investing in pipelines are entitled to a 7% return on money invested. Latest Interstate Commerce Commission valuation of pipelines would be used as a basis for determining what constitutes a 7% return.

Final judgment provides that, effective Jan. 1, 1942, no defendant pipeline common carrier shall pay to any shipper owner "any earnings, dividends, sums of money or other valuable considerations derived from transportation or other common carrier services which in the aggregate is in excess of its share of seven per centum (7%) of the (latest) valuation of such common carrier's property, if such common carrier shall have transported during said calendar

(*Continued on page* 14)

## Maloney Finds 'No Shortage' But PCO's Plans Unchanged

*By Teletype*
NPN News Bureau

WASHINGTON, Sept. 16.—Despite Chairman Maloney's report last week that the Senate Oil Shortage Investigating Committee finds "no shortage" of oil exists along the East Coast, the Petroleum Co-ordinator's Office has changed few—if any—of its plans to curtail gasoline consumption, to seek construction of the Texas-East Coast crude pipeline or to carry out other policies formed before Senate committee existed, according to reports from PCO today.

Chairman Maloney called a recess in hearings on Sept. 10, which may resume Sept. 29 or later, Sen. Burton, Ohio, committee member, told NPN. Meanwhile, committee will study the East Coast situation without hearings.

"There is no shortage of petroleum products—nor a shortage, as of this date, of transportation facilities," the Senate committee report, filed by Chairman Maloney with the Senate Sept. 11, asserted. "The whole frightening picture, from the standpoint of the Co-ordinator's Office, seems to lie in the fact that the shortage which has excited the activity of the Co-ordinator, is really a large surplus (in stocks) which is desired."

Disagreeing with this, Mr. Davies, in his statement, said that "when the surplus remains consistently below last year, when demands for petroleum products remain consistently higher than last year, when normal means of transportation to replenish surplus are cut off drastically—then in the opinion of the Office of Co-ordinator, a problem of shortage does exist."

Maloney committee report further declared that "unnecessary alarm" had been created in the handling of the petroleum problem, attributing this to "over-enthusiasm" on the part of those charged with its direction. Had an adequate analysis of the situation been made, the confusion of the past few months could have been avoided, the report declared.

#### Cite Pelley's Figures

Committee's conclusion that there is no shortage of oil transportation on East Coast is based on "studied opinion and the 'serious' promises" of President J. J. Pelley of Assn. of American Railroads and Defense Transportation Commissioner Budd, the report continued. Messrs. Pelley and Budd told the committee during the public hearings that 20,000 tank cars are available for East Coast service. (See NPN Sept. 3, p. 5 and Sept. 10, p. 20.)

Committee has not attempted to explore charges of "un-

(*Continued on page* 15)

# PCO's Staff Totals 1250, Maloney Committee Is Told

NPN News Bureau

WASHINGTON, Sept. 13.—Following is complete listing to date of executives and advisors in Petroleum Co-ordinator's Office headquarters here. List which totals 60 was made public this week at request of Sen. Maloney, chairman of the special committee investigating East Coast oil "shortage".

When Chairman Maloney asked Mr. Davies for total number of personnel on PCO's staff, Stanley W. Crosthwait replied there were 1250. This number includes executives, stenographers and clerks.

**Marketing Division**

**Dr. John W. Frey,** director; formerly associate director of Petroleum Conservation Division, Department of Interior.

**Paul A. Best,** marketing specialist; formerly, city sales manager for The Texas Co. at Seattle, Wash.

**Ned F. Foulds,** chief marketing analyst; formerly in partnership with Stratford Sales Service, Meriden, Conn.

**Charles R. Denis,** chief, fuel oil section; formerly assistant division manager for Gulf in Boston.

**John E. Mayo,** marketing specialist; formerly supervising liquidation of closed banks, Federal Deposit Insurance Corp.

**Richard C. McCabe,** marketing analyst; formerly petroleum industry analyst, Bureau of Foreign and Domestic Commerce.

**Transportation Division**

**Henry A. Gilbert,** director; formerly president of Oil Transfer Corp., New York City.

**Stanley L. Westlake,** special consultant on pipe lines; formerly chief engineer Ajax Pipe Line Corp. and Oklahoma Pipe Line Co., Tulsa.

**Ralph P. Russell,** rail transportation section; formerly vice-president and superintendent of car service for Pennsylvania Railroad, Philadelphia.

**Refining Division**

**Wright W. Gary,** director; formerly in business for himself engaged in special refining and development of crude oil.

**Philip M. Robinson,** assistant director of refining, formerly petroleum consultant Office of Production Management and chief engineer for Pennzoil Co.

**Robert B. Cragin,** assistant director of refining; formerly with N. W. Kellogg Co., New York City.

**Vernon W. Balzer,** refining material expert; formerly industrial engineer in charge of methods, planning and plant layout, Ford Instrument Co., Long Island, N. Y.

**Production Division**

**Robert E. Allen,** director; formerly chairman and executive, Petroleum Conservation Board, Calgary, Canada.

**Ralph J. Schilthuis,** assistant director; formerly supervising engineer, Humble, Houston.

**Sturgis L. Stentz,** assistant director; formerly sales manager, National Tank Co., Tulsa.

**Elmer G. Dahlgren,** senior petroleum development analyst; formerly gas valuation engineer, Securities and Exchange Commission.

**Malvin G. Hoffman,** petroleum production analyst; formerly research engineer, Geochemical Service Corp., Tulsa.

**Ernest A. Wye, Jr.,** economic analyst; formerly production allocation analyst, Jersey Standard, New York City.

**Nicholas G. Dumbros,** petroleum development analyst; formerly in Office of Administrator of Export Control.

**Gertrude M. Drach,** petroleum development analyst; formerly business specialist in Office of Price Administration and Civilian Supplies.

**Conservation**

**Everette L. DeGolyer,** director; formerly consulting petroleum engineer in business for himself.

**Foreign Division**

**William D. Crampton,** consultant on foreign shipping; formerly managing director and vice-president of Standard Francaise des Petroles, Paris, France, S. A.

**Cornelius S. Snodgrass,** assistant director; formerly foreign intelligence, U. S. Navy Department.

**John D. Kurtz,** associate petroleum export engineer; formerly territorial comptroller, assistant on cargo, Atlantic Refrigeration Co., Philadelphia.

**Legal Division**

**J. Howard Marshall,** chief counsel; formerly assistant dean in Yale University School of Law and partner in law firm of Pillsbury, Madision & Sutro, San Francisco.

**Robert E. Friedman,** assistant solicitor; formerly in Office of the Solicitor, Department of Interior.

**David M. Hudson,** assistant solicitor; formerly in Office of Solicitor, Department of Interior.

**Special Assistants**

**George W. Holland,** special assistant to Mr. Davies; formerly director of Petroleum Conservation Division, Department of Interior.

**Howard T. Mather,** special assistant to Mr. Davies; formerly assistant to vice-president and general counsel, Case, Pomeroy & Co., New York City.

**Herbert C. Ide,** assistant to Mr. Davies; formerly assistant to senior vice-president and director of California Standard.

**Gordon M. Sessions,** assistant to Mr. Davies; formerly research man and publicity director, Citizens Public Expenditure Survey, Board of Trade, Chicago.

**William S. Arnold,** special assistant to Mr. Davies; formerly executive of Guyer, Cornell & Newell, New York City.

**Stanley W. Crosthwait,** executive officer; formerly assistant to Commissioner of Indian Affairs, Department of Interior.

**Information Division**

**Herbert A. Yocom,** director; formerly wire editor, reporter and correspondent in Reno, San Francisco and Washington for Associated Press.

**Frank C. Adams,** information specialist; formerly owned and operated general publicity, Adams Advertising Agency, Austin, Tex.

List of PCO's personnel in various field offices follow:

**District 1—New York City**

**Dustin W. Wilson,** district director of refining; formerly consulting engineer, M. W. Kellogg Co., New York City.

**Louis H. Spiner,** district director of marketing; formerly executive assistant of president of Laclede Gas Co., Laclede Gas Building, St. Louis.

**James B. Wylie, Jr.,** district director of production; formerly examined and reported upon geology and value of oil and gas properties in U. S., Huntley & Huntley, Pittsburgh.

**Walter J. Heison,** office manager; formerly junior administrative assistant Fish and Wildlife Service Department, Department of Interior, Minneapolis.

**District 2—Chicago**

**Earl Petty,** district director of refining; formerly technical executive, American Locomotive Co., New York City.

**Wirt Franklin,** district director of production; formerly engaged in oil business for himself. Has been since 1913.

**Walter DuMont,** district director of transportation; formerly in petroleum transportation works, Pure Oil Co., Chicago.

**Harold L. Wadsworth,** assistant district director of production; formerly president of Associated Petroleum Co., engaged in production work, Detroit.

**Robert B. Newcombe,** chief development and production analyst; formerly consulting geologist, Grand Rapids, Mich.

**District 3—Houston**

**Grady H. Vaughn,** district director of production; formerly worked for himself in drilling, also producer and owner of oil properties.

**Gordon T. Granger,** district director of refining; formerly superintendent of refinery, manager of operations, Bareco Oil Co., Corpus Christi, Tex.

**E. O. Buck,** assistant district director of production; formerly consulting petroleum engineer and geologist for himself and gas laboratories.

**Emmett R. Brann,** assistant district director of production; formerly oil producer in business for himself, Shreveport, La.

**District 5—Los Angeles**

**Charles B. Garretson,** district director of marketing; formerly executive secretary of Fair Practices Assn., Los Angeles.

**Edward E. Easton,** production specialist; has checked producing oil leases in California since 1930.

**At Large**

**Ruth S. Knowles,** petroleum specialist; for past 4 years has been writing popular and technical articles about the petroleum industry.

In explanatory notes preceding above list of names, it was stated that these executives, advisors, assistants and specialists receive compensation of $3200 or more.

**Harold W. Pauley,** president of The Petrol Corp. who returned from London Aug. 29, was sent over there as a special representative to Mr. Ickes. This past week he left Washington for his home in Los Angeles, but it is understood that he will return shortly.

## PCO Appoints Ralph Russell To Transport Section

WASHINGTON, Sept. 15. — Chief of the rail transportation section in Petroleum Co-ordinator's Office will be Ralph Park Russell, Acting Petroleum Co-ordinator Davies announced Mr. Russell will devote full time to petroleum rail transportation problems.

Vice-president and superintendent of car service for Pennsylvania Railroad, Mr. Russell has been with the company for past 39 years.

*Ralph P. Russell*

## PCO Names 15 Men To District Groups

NPN News Bureau

WASHINGTON, Sept. 13.—Fifteen additional oil men were appointed to eight district committees this week, announced Acting Petroleum Co-ordinator Davies. They are:

**District 1, Transportation committee—A. William Rowe,** Boston, district sales manager, Cities Service, and **R. R. Griffin,** New York City, vice-president of Shell.

**District 3, Transportation committee—J. R. Parten,** Longview, Tex., board chairman of Premier Oil Refining Co. ( Mr. Parten was transferred from District 3 marketing committee.)

**District 4, Refining committee—E. S. Holt,** Salt Lake City, vice-president, Utah Oil Refining Co., and **F. L. Perry,** Denver, Perry Petroleum Co.

**Transportation committee—Kenneth W. Davis,** Cut Bank, Mont., president of Cut Bank Refining Co., and **C. J. Westcott,** Boise, Idaho, president of Westcott Oil Co.

**Marketing committee—D. F. Benton,** Denver, Indiana Standard, and **W. J. Dineen,** Cheyenne, Wvo., president of The Dineen Co.

**District 5, Production committee—W. C. Whaley,** Los Angeles, Barnsdall Oil Co., and **Lloyd Williamson,** Los Angeles, California Star Oil Co.

**Refining committee—A. M. Kelly,** Los Angeles, Richfield, and **S. J. Dickey,** Los Angeles, General Petroleum.

**Marketing committee—C. A. Johnson,** Los Angeles, president of Socal Oil and Refining Co. (Mr. Johnson was transferred from the refining committee). **A. H. DeFriest,** Los Angeles, General Petroleum.

## PCO's Petty to Study Russian Refineries

NPN News Bureau

WASHINGTON, Sept. 16.—Russia's refinery needs will be studied first-hand by Earl Petty, District 2 refining director, according to word today from Petroleum Co-ordinator's Office.

Mr. Petty is now en route to Russia with the U. S. mission to the 3-power supply conference in Moscow. President Roosevelt reportedly told these men to work out effective plans for supplying Russia with necessary equipment to defeat Hitler. Mission is now in London where members will first confer with British mission, arriving in Moscow late this month.

Upon basis of Mr. Petty's report to PCO, necessary action from U. S. is expected along lines of supplying Russian refinery needs. This policy was indicated by Petroleum Co-ordinator Ickes shortly before he left on his recent vacation to the West.

### Jobber Praises NPN For 'Prompting' Oil Probe

CLEVELAND, Sept. 15.—Senate investigation of "oil shortage" on East Coast was prompted largely by editorials of NPN's Editor Platt demanding facts and more facts on the situation, according to Gordon Duke, Jacksonville, Fla., of Southeastern Oil Co., Independent jobber. Mr. Duke writes to NPN as follows:

"I've just been thinking that Mr. Platt's editorials in the good old NPN demanding facts, facts, facts on the East Coast situation undoubtedly had more to do with prompting the current Senate committee investigation than any other single thing.

"I feel indebted to him for his stand. Every other oil man on the eastern seaboard, as well as every car owner in this area, doubtless feels as I do. Likewise, doubtless many are too lazy or unthinking to take the time to express their appreciation of Mr. Platt's excellent editorials. I, for one, say 'Good job, well done.'"

## OPA Seeks Grievances Of Penn Grade Men

NPN News Bureau

WASHINGTON, Sept. 13.—Requests to Office of Price Administration from producers of Pennsylvania grade crudes for an audience will be granted as soon as they outline their exact grievances, NPN was told this week by an OPA official.

OPA was waiting word from the producers this week.

This audience was sought by Pennsylvania producers to discuss OPA's Aug. 23 "ceiling" on Penn grade crudes which wiped out a 23-25c per bbl. advance. Top prices were set by OPA, effective Aug. 23. (See NPN Aug. 27, 1941, p. 7).

Meanwhile, OPA stated that plans to publish a schedule of "fair" retail prices in Massachusetts was being postponed as retail prices in this area were said to be "in line" with OPA's schedule. (See NPN Sept. 3, 1941, p. 7).

### Garretson Leaves for West

WASHINGTON, Sept. 16. — C. B. Garretson, District 6 Marketing Director (West Coast) is leaving Washington today for Los Angeles. Mr. Garretson has been working with the Petroleum Co-ordinator's Office here for past 9 weeks.

## September 'Gas' Supply Hiked For Counties in Five States

NPN News Bureau

WASHINGTON, Sept. 13—In order to provide additional necessary gasoline supplies during September to certain counties in Maine, North and South Carolina, Georgia and Virginia, Chief Counsel J. Howard Marshall of Petroleum Co-ordinator's Office today notified H. W. Dodge, New York, chairman of District 1 marketing committee that PCO had taken cognizance of this need and was acting.

Mr. Marshall stated that certain counties (listed below) in these states would be supplied motor fuel for September on the basis of their individual September 1940 gallonage plus 10%.

**Counties Listed**

Areas where increased September deliveries are permitted include sole county of Aroostook, Me., and those counties lying east of and including the following counties:

**North Carolina** — Granville, Durham, Wake, Harnett, Lee, Moore, Montgomery, Richmond.

**South Carolina** — Marlboro, Darlington, Lee, Sumter, Calhoun, Orangeburg, Barnwell.

**Georgia** — Burke, Emanuel, Johnson, Lauren, Bleckley, Pulaski, Dooly, Sumter, Webster, Stewart, Quitman, Clay, Early, Seminole.

**Virginia** — Dinwiddie, Brunswick, Patrick, Henry, Franklyn, Campbell, Prince Edward, Nottoway, Halifax, Charlotte, Mecklenburg, Lunenburg, Pittsylvania.

Conclusion of Mr. Marshall's telegram follows:

**Additional Adjustments**

"The interpretation of the Civilian Allocation Program for motor fuel by both this office and the Division of Civilian Supply of the Office of Production Management is that:

"(a) Army Post exchanges and Navy supply stores constitute governmental buyers and are preferred users under section 1340.3 of the Civilian Allocation program to extent of their minimum necessary requirements.

"(b) Resellers, and service stations which received subnormal deliveries during the month of July 1941 shall receive in September their appropriate percentage of their July deliveries adjusted to normal, provided that in the areas where September 1940 shall be taken as a base, subnormal deliveries in that month shall be adjusted to normal.

"The above listed determinations and adjustments shall be made by each supplier in accordance with the provisions of Recommendation No. 6 which requires adjustments between companies and between areas so that there shall be effected an overall 10% reduction below July 1941 deliveries of motor fuel as required by the Civilian Allocation Program."

### Recommendation Cited As Anti-Trust Aid

NPN News Bureau

WASHINGTON, Sept. 13.—"An aid to prevent violations of the anti-trust laws" is the way Assistant Attorney General Arnold, late this week, described Recommendation No. 10, which seeks provisions for an equitable distribution of petroleum products to non-contract buyers. (For details see NPN Sept. 10, 1941, p. 61.)

In announcing his approval Mr. Arnold said: ". . . the information which under the recommendation will be furnished to the Office of the Petroleum Coordinator may enable both that Office and the Anti-Trust Division to prevent violations of the anti-trust laws."

**What is Ahead for the Independent Oil Jobber ?**

**SEE PAGE 25**

# D.J. Sees End To Elkins Act Pipeline Suits

(*Continued from page* 11)

year any crude oil, or gasoline, or other petroleum products for said shipper-owner."

Earnings in excess of those which could be distributed among the owners would be retained by the pipeline carrier, according to the proposed judgment. Such earnings would be placed in the surplus account and could be used by the carrier during the current calendar year for extending existing or building or acquiring new facilities, maintaining reasonable working capital or retiring debt outstanding at the time judgment is entered provided such debt was originally incurred to build or acquire common carrier property. In case of dissolution or sale of a carrier, any funds in the surplus account would be distributed among the stockholders.

Provision is made in the judgment for computing improvements and depreciation since the date of the last ICC final valuation, and also for the pipeline carrier to compute its own valuation where the ICC has not made a final valuation. All such computations must be made in accordance with ICC methods.

Judgment states that it shall not be construed as restricting or enlarging any rights of National Defense pipeline projects under the Cole Pipeline Bill. Nor shall the judgment prevent any divorcement of pipelines as might be ordered in anti-trust suits, including the pending suit against American Petroleum Institute, Ethyl Gasoline Corp., 22 major oil companies, and their alleged affiliates.

**Provides for Modification**

Judgment contains a provision that when payments in excess of the 7% limit are paid shipper-owners, the government can secure judgment for 3 times the amount so paid. Another provision permits the court to modify the final judgment at the request of both the government and the defendant oil and pipeline companies.

Term "defendant common carrier" is so defined as to make the judgment applicable to interstate pipelines and their successors, subsidiary of a defendant, pipeline department, corporation some of whose stock is owned by a defendant, or a pipeline owned or operated so that a defendant, its successor or subsidiary may participate in its earnings.

Proposed complaint in the new suits, like those previously filed in the 3 pending Elkins Act cases, proceeds on the theory that dividends paid oil companies by pipelines constitute illegal rebates in violation of the Elkins and Interstate Commerce Commission Acts. Complaint asks that all payments by pipelines to shipper-owners be prohibited, but in the final judgment this request is modified to permit owner oil companies to receive 7% on their investments.

### South Carolina Trucker Seeks Pipeline Business

NPN News Bureau

WASHINGTON, Sept. 15.—Permission to truck petroleum and products from proposed new pipeline terminal in the Southeast to points in surrounding states is asked in an application filed with the Interstate Commerce Commission by Hughes Transportation, Inc., Charleston, S. C.

Hughes company would secure its petroleum and products from pipeline terminals in Athens, Ga., Belton and Spartanburg, S. C., and Charlotte, N. C., and would transport them to all points in North Carolina, South Carolina, Georgia and Tennessee.

Hughes concern, which now delivers petroleum and products from Wilmington, N. C., also asks permission to operate out of Savannah, Ga. Applicant also trucks powder from Charleston to points throughout the Southeast.

### Atlantic Moves Crude By Rail from Illinois

*Atlantic Refining Co.'s aim to move* 10,000 *bbls. daily of Illinois crude by rail to Philadelphia got under way when first trainload of* 21 *tank cars carrying* 5000 *bbls. pulled in to unload under a new* 25*-car rack. Atlantic has given up equivalent of four and three-quarters* 10,000 *ton tankers to British shuttle service; will use between* 500 *and* 600 *tank cars in Illinois-Philadelphia service when rail-shipment plans are completed*

# Labor Department Prepares Book on Wage-Hour Records

NPN News Bureau

WASHINGTON, Sept. 16.—A 31-page booklet on "How to Keep Wage and Hour Records", under Fair Labor Standards Act of 1938, was made available by U. S. Department of Labor late this past week.

Effective Sept. 15, this booklet shows employers how to keep records for employes entitled to minimum wages and to overtime after 40 hours per week. Majority of booklet deals with record-keeping under exemptions from the Act. How to keep records on executives, administrative, professional, local retail and outside sales employes is also included.

One section deals with employes under more than 1 minimum hourly rate fixed by wage orders, another section with learners, apprentices, messengers and handicapped workers. Booklet states payroll records must be preserved for 4 years.

**Copies Available**

Copies of this booklet may be obtained direct from Wage and Hour Division, U. S. Department of Labor, Washington, D. C.

This bulletin states there is no specific requirement to keep records in any particular form. "The requirement is that the employer maintain records which contain the information and data named or listed. This permits the employer considerable latitude in the order, form and content of his records."

Comptrollers Institute of America (of which officials in many oil companies are members) was among organizations filing petitions to revise Wage-Hour regulation in order to simplify payroll regulations.

### District 2 Production Group Appoints Subcommittees

NPN News Bureau

CLEVELAND, Sept. 16.—To determine the amount of tubular and fabricated equipment which will be required by the producing branch of the oil industry for the rest of 1941 and all of 1942, District 2 Production Committee Chairman O. D. Donnell, Findlay, Ohio, president of Ohio Oil Co. has announced the appointment of a number of subcommittees to make surveys. Committees will study ways and means in which steel can be conserved and at the same time maintain adequate production of crude oil and natural gas.

Chairman of the temporary subcommittee on equipment, materials and supplies for entire district is Frank O. Prior, Tulsa, Stanolind Oil & Gas Co. Subcommittees on well spacing, unitization, secondary recovery, and engineering have been set up for Oklahoma and other producing states in the district.

### Southeastern Pipeline Underway in 60 Days

NPN News Bureau

WASHINGTON, Sept. 13.—Within less than 60 days, Southeastern pipeline, extending from Port St. Joe, Fla., to Chattanooga, Tenn., will be in operation. Delivery of petroleum products through this line will have effect of additional 1,260,000 gals. of refined products daily, Petroleum Co-ordinator's Office announced this week.

Extending 485 miles, this line was completed Sept. 10, except for 28 miles in Georgia. Line is expected to deliver 30,000 bbls. daily.

President Roosevelt issued proclamation giving Southeastern eminent domain in answer to Bernard W. Winters, Southeastern's manager, who notified Acting Petroleum Co-ordinator of inability to negotiate rights-of-way in Georgia.

Southeastern pipeline will distribute products at or near Albany, Macon and Atlanta, Ga., PCO reports, as well as serving an important industrial defense area.

# Tuscarora Pipeline Reversed for Crude

WASHINGTON, Sept. 15.—Tuscarora pipeline, extending from Bayway, N. J. to Midland, Pa., will be carrying 25,000 bbls. daily of crude to East Coast within next 30 to 60 days, Acting Petroleum Co-ordinator Davies announced late this week.

Because pumping stations are not properly spaced to move crude eastward, line will be delayed. Estimated cost for this additional work is between $250,000 and $300,000. Tuscarora line has been moving petroleum products westward since 1930. Products capacity of this line is 32,000 bbls. daily.

### Propose Texas Rail Cut From 3 Origin Points

TULSA, Sept. 15—To enable the movement of topped crude and petroleum residuum to the Enid, Oka., refining center, Southwestern Freight Bureau has proposal for 11 to 28c per bbl. reductions in present rates from Three Rivers, San Antonio and Phoenix, Tex.

### Pauley Goes to California; Will Return to D. C.

NPN News Bureau

WASHINGTON, Sept. 13. — Petroleum Co-ordinator Ickes' special representative to London, Edwin W. Pauley, returned to his Los Angeles home this week, but is expected back in the capital shortly.

Mr. Pauley, president of The Petrol Corp., Los Angeles, returned to Washington from his London trip Aug. 29, and has submitted a report which is scheduled to be among first things Mr. Ickes will read upon his return home next week from a vacation in the West. Mr. Pauley was sent to London to study the oil situation "in all its phases".

## Total Oil Stocks Along East Coast Increase in Week

NPN News Bureau

NEW YORK, Sept. 16.—Total stocks of refined products on the East Coast increased 925,000 bbls. in week ended Sept. 13, according to American Petroleum Institute report today.

Gas oil and distillate stocks increased 747,000 bbls. to 16,418,000 bbls.; residual fuel stocks increased 743,000 bbls., to 10,241,000 bbls. These increases, totaling 1,490,000 bbls., offset a 565,000-bbl. drop in gasoline stocks, according to A.P.I.'s figures.

Compared with comparable date in 1940, however, East Coast stocks were down a total of 5,908,000 bbls. Gasoline stocks were 2,378,000 bbls. below last year and residual fuel stocks 2,396,000 bbls. below last year. See table and graph on page 16.

### Curfew Will Continue On Eastern Stations

NPN News Bureau

NEW YORK, Sept. 15.—No recommendation will be made by District 1 marketing committee to re-open service stations along East Coast from 7 p.m. to 7 a.m., according to word here this past week.

It is understood that of the hundreds of telegrams received by Petroleum Co-ordinator's Office, following Mayor LaGuardia's statement that he saw no reason why stations should not be re-opened, less than 10 were in favor of reopening. Many of these telegrams told PCO they were happy over situation and that they were now able to spend time with their families.

# Maloney Finds 'No Shortage' But PCO's Plans Unchanged

(*Continued from page* 11)

worthy purposes" behind the so-called oil shortage, the report said. Nor has it attempted to find out whether the shortage arose as a result of a desire to build pipelines, whether there is a behind-the-scenes connection with pending anti-trust suits, or whether the price of petroleum products is involved. These charges have not been dismissed altogether, but the committee felt it is its immediate duty to determine whether an oil shortage exists, report added.

#### Steel 'Most Important'

Report also observed that new pipelines may be "extremely important" in connection with national defense, but most important is the question of allocating steel for the National Defense pipeline from East Texas to New York-Philadelphia areas.

Statement issued by Mr. Davies declared that actions taken by PCO already had reduced by more than half the original daily East Coast shortage caused by diversion of tankers to the British shuttle service—from a daily deficiency of 320,200 bbls. to only 174,500 bbls.

To PCO, the admittedly low condition of petroleum stocks on the East Coast continues to mean shortage and necessity for appropriate action, Mr. Davies said, adding that the stocks are 8,937,000 bbls. or 13% less than last year, although the demand for the rest of this year is estimated 10% higher.

#### Agree on Transportation

"Endorsement by the special Senate committee, in its report, of the oil and gasoline conservation program instigated by the Co-ordinator's office, is appreciated," Mr. Davies stated. "The declaration of the committee that all forms of transport, including railroad tank cars, must be used to the limit is concurred in by the Co-ordinator's Office which for 3 months has been acting in accord with that policy and continues to do so."

#### Gives 'Shortage' Figures

Filing of a "balance sheet" showing the basis for Mr. Davies East Coast daily oil shortage figure of 174,500 bbls. for the rest of 1941, provided the climax for the final day of public hearings before the Maloney committee on Sept. 10. Submitted by E. B. Swanson, PCO research director, the balance sheet follows:

| (Figs. in bbls. per day.) | |
|---|---|
| **Original shortage forecast** | **353,200** |
| **Less—** | |
| Increased load-line and tanker efficiency | 60,000 |
| Additional crude by pipeline | 20,000 |
| Additional crude by barge | 10,000 |
| Additional products by truck | 15,000 |
| Crude moved by 10,000 tank cars | 73,300 |
| Net shortage | 174,500 |

Additional possibilities for alleviating the East Coast shortage but not included in the 4th quarter forecast:

| (In bbls. per day.) | |
|---|---|
| Gasoline conservation | 30,000 |
| Fuel oil conservation | 10,000 |
| Conversion to coal | 15,000 |
| Transfers of Great Lakes tankers | 12,000 |
| Pipeline reversals | 60,000 |
| Total | 127,000 |

Submission of this table precipitated extensive questioning from the Maloney committee members, and in replying, Messrs. Swanson and Davies provided the following explanation of the "balance sheet":

#### Includes New Tankers

The 60,000-bbl. figure for loadline and increased tanker efficiency includes new tankers coming into service and the new Portland-Montreal pipeline. Truck figure of 15,000 bbls. contemplates the rearrangement of the distribution facilities on the western fringe of the East Coast area. Tank car figure is what 10,000 tank cars can do this year, and is expected to increase to 100,000 bbls. daily in 1942. Another 10,000 cars in addition to those used by PCO in its balance sheet must be "found", to make up the Pelley-Budd figure of 20,000 tank cars available for East Coast service.

Gasoline conservation figure is Mr. Swanson's personal estimate, Mr. Davies told the Maloney committee, stating that it could be increased from 30,000 to 60,000 or 75,000 bbls. daily if the confusion is clarified and the public is made to feel that conservation is necessary.

#### Ohio 'May Be Short'

Ohio was described by Mr. Davies as "pretty close" to a shortage, and for this reason it is questionable how much gasoline District 1 can secure from District 2, he said.

PCO is considering the proposed Trans-American pipeline, from Texas to Savannah, Ga., and also a "small pipeline" from Montana to Puget Sound, according to Mr. Davies, who added that it is too early to comment on these projects. Use of the National Defense pipeline for natural gas is not legally possible, acting co-ordinator stated, although it is physically possible to do so.

PCO also is considering a proposal from a "man by the name of Haliburton" to build ocean-going steel oil barges, but information had not been received as yet from Maritime Chairman Land on his plans to build concrete oil barges, Mr. Davies said.

#### Oil from Latin America

Importation of oil from Latin America is being continued in accordance with State Department treaties, Mr. Davies stated in reply to a question from Sen. O'Daniel, Tex. Mr. Swanson stated that tanker time was the same to the East Coast from Latin America as from the Gulf Coast. Loading facilities in Latin America are comparable to those on the Gulf, Mr. Davies added.

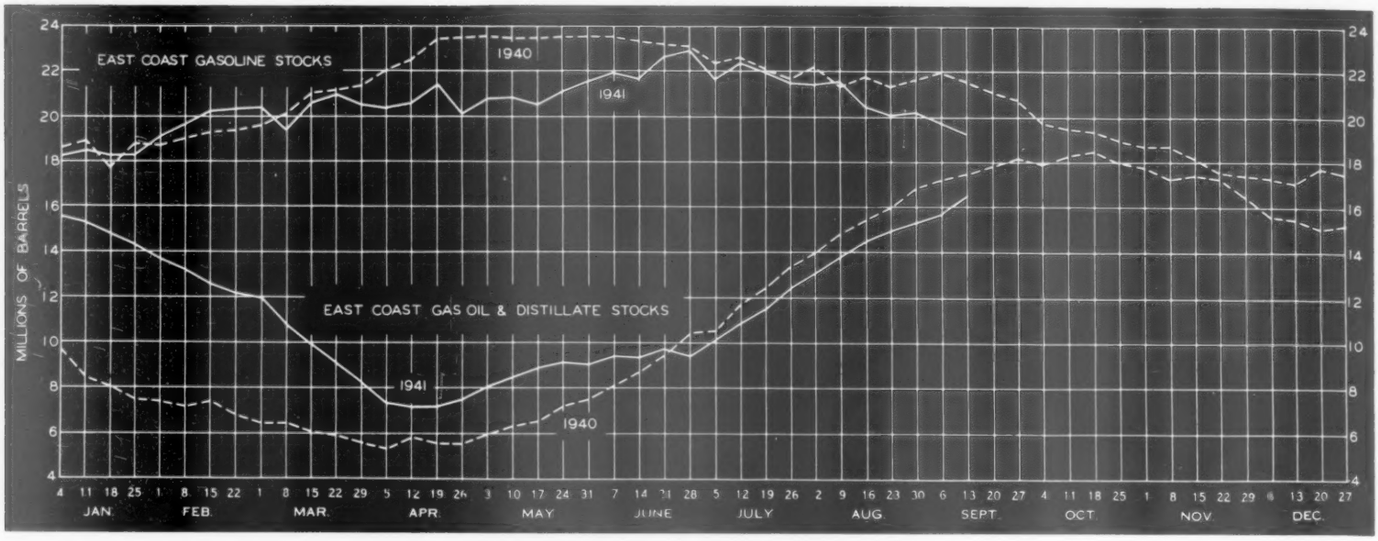
Sen. Maloney previously had read a letter from Russell B. Brown, general counsel, Independent Petroleum Assn. of America, stating that oil imports in the first half of 1941 were 207,593 bbls. daily, as compared with 167,752 bbls. in 1940 and 101,233 bbls. in 1939.

Quinn Shaughnessy, OPA oil price executive, told the committee that if the price ceiling were entirely removed from Pennsylvania grade crude, production would be only 1000 bbls. additional per day.

**The Independent Oil Jobber Fulfills What Economic Need ?**

**SEE PAGE 25**

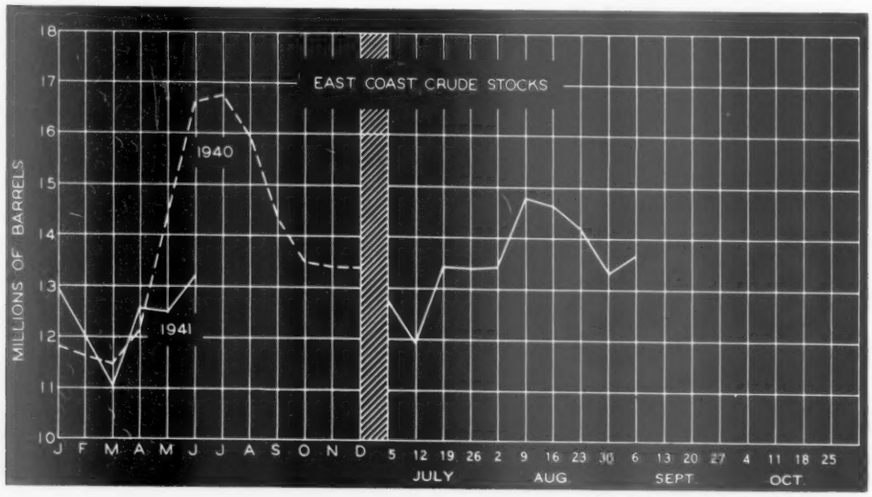
# BAROMETER OF EAST COAST REFINERY OPERATIONS AND STOCKS




## East Coast Refinery Runs and Refined Stocks

(From API current weekly figures, representing 100% of refining capacity. Nearest comparable week in previous year is used. Figures in thousands of bbls.)

| Week Ended | Daily Avg. Crude Runs to Stills | | Gaso. Prod. at Refineries | | Stocks Finished & Unfinished Gaso. | | Stocks Gas Oil & Distillate | | Stocks Residual Fuel Oil | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1941 | 1940 | 1941 | 1940 | 1941 | 1940 | 1941 | 1940 | 1941 | 1940 |
| Jan. 4 | 583 | 602 | 1,415 | 1,644 | 18,193 | 18,613 | 15,635 | 9,731 | 10,811 | 7,646 |
| Jan. 11 | 535 | 605 | 1,412 | 1,611 | 18,488 | 18,915 | 15,275 | 8,506 | 10,859 | 7,546 |
| Jan. 18 | 516 | 602 | 1,493 | 1,720 | 18,228 | 17,726 | 14,837 | 8,015 | 10,106 | 7,739 |
| Jan. 25 | 544 | 554 | 1,375 | 1,526 | 18,317 | 18,760 | 14,292 | 7,488 | 9,897 | 7,575 |
| Feb. 1 | 548 | 538 | 1,538 | 1,508 | 19,062 | 18,715 | 13,731 | 7,386 | 9,543 | 7,432 |
| Feb. 8 | 567 | 545 | 1,478 | 1,404 | 19,683 | 18,981 | 13,197 | 7,201 | 9,756 | 6,793 |
| Feb. 15 | 562 | 579 | 1,506 | 1,445 | 20,239 | 19,227 | 12,647 | 7,459 | 9,120 | 7,898 |
| Feb. 22 | 579 | 551 | 1,454 | 1,350 | 20,381 | 19,378 | 12,150 | 6,797 | 9,326 | 7,492 |
| March 1 | 558 | 540 | 1,412 | 1,433 | 20,383 | 19,624 | 11,905 | 6,457 | 8,536 | 7,865 |
| March 8 | 553 | 568 | 1,489 | 1,572 | 19,426 | 20,111 | 10,809 | 6,488 | 8,472 | 8,078 |
| March 15 | 542 | 576 | 1,506 | 1,627 | 20,638 | 20,977 | 9,909 | 6,025 | 8,649 | 7,964 |
| March 22 | 589 | 592 | 1,501 | 1,510 | 20,971 | 21,135 | 9,068 | 5,942 | 7,688 | 7,905 |
| March 29 | 595 | 595 | 1,577 | 1,646 | 20,495 | 21,430 | 8,206 | 5,627 | 8,665 | 7,689 |
| April 5 | 601 | 530 | 1,645 | 1,517 | 20,322 | 21,982 | 7,425 | 5,306 | 7,984 | 7,751 |
| April 12 | 583 | 595 | 1,606 | 1,614 | 20,633 | 22,476 | 7,190 | 5,804 | 8,897 | 8,017 |
| April 19 | 536 | 578 | 1,601 | 1,485 | 21,411 | 23,386 | 7,208 | 5,640 | 8,659 | 8,217 |
| April 26 | 537 | 595 | 1,456 | 1,542 | 20,177 | 23,417 | 7,641 | 5,574 | 8,483 | 7,979 |
| May 3 | 611 | 535 | 1,651 | 1,469 | 20,787 | 23,615* | 8,004 | 5,975 | 8,717 | 7,948 |
| May 10 | 593 | 576 | 1,610 | 1,270 | 20,810 | 23,429 | 8,515 | 6,351 | 8,562 | 8,771 |
| May 17 | 570 | 590 | 1,628 | 1,333 | 20,587 | 23,487 | 8,879 | 6,598 | 8,156 | 8,752 |
| May 24 | 603 | 573 | 1,584 | 1,321 | 21,157 | 23,618 | 9,122 | 7,218 | 8,467 | 8,115 |
| May 31 | 574 | 585 | 1,635 | 1,463 | 21,657 | 23,603 | 9,060 | 7,615 | 8,012 | 8,646 |
| June 7 | 600 | 577 | 1,708 | 1,411 | 21,965 | 23,588 | 9,548 | 8,036 | 8,578 | 8,953 |
| June 14 | 558 | 590 | 1,603 | 1,456 | 21,705 | 23,357 | 9,405 | 8,745 | 8,109 | 8,551 |
| June 21 | 587 | 606 | 1,487 | 1,669 | 22,620 | 23,206 | 9,725 | 9,526 | 8,450 | 8,844 |
| June 28 | 600 | 561 | 1,645 | 1,492 | 22,888 | 23,043 | 9,421 | 10,401 | 8,240 | 8,842 |
| July 5 | 602 | 532 | 1,672 | 1,382 | 21,698 | 22,286 | 10,035 | 10,521 | 7,911 | 9,654 |
| July 12 | 644 | 560 | 1,733 | 1,439 | 22,364 | 22,671 | 10,835 | 11,775 | 8,262 | 10,270 |
| July 19 | 570 | 558 | 1,642 | 1,535 | 21,932 | 22,054 | 11,511 | 12,460 | 8,775 | 10,365 |
| July 26 | 593 | 563 | 1,600 | 1,496 | 21,555 | 21,846 | 12,389 | 13,415 | 8,972 | 10,460 |
| | | | | | 21,438 | 22,221 | 13,069 | 13,982 | 9,989 | 10,293 |
| Aug. 2 | 593 | 560 | 1,773 | 1,492 | | | | | | |
| Aug. 9 | 610 | 577 | 1,642 | 1,540 | 21,686 | 21,317 | 13,782 | 14,739 | 9,638 | 10,865 |
| Aug. 16 | 586 | 603 | 1,488 | 1,594 | 20,475* | 21,848 | 14,433* | 15,452 | 9,035* | 11,044 |
| Aug. 23 | 615 | 591 | 1,688 | 1,606 | 20,094 | 21,373 | 14,896 | 15,967 | 8,791 | 11,590 |
| Aug. 30 | 644 | 600 | 1,654 | 1,530 | 20,261 | 21,776 | 15,266 | 16,855 | 9,127 | 11,836 |
| | | | | | 19,803 | 21,930 | 15,671 | 17,232 | 9,498 | 11,987 |
| Sept. 6 | 629 | 583 | 1,664 | 1,530 | | 21,616 | | 17,552 | | 12,637 |
| Sept. 13 | 590 | 605 | 1,667 | 1,626 | 19,238 | 21,616 | 16,418 | 17,552 | 10,241 | 12,637 |




## East Coast Crude Stocks

(Bureau of Mines figures; thousands of bbls.)

End of Month

| | | | |
|---|---|---|---|
| 1940 | | 1940 | |
| Jan. | 11,827 | Nov. | 13,490 |
| Feb. | 11,644 | Dec. | 13,489 |
| March | 11,491 | | |
| April | 12,184 | 1941 | |
| May | 14,473 | Jan. | 12,935 |
| June | 16,624 | Feb. | 12,104 |
| July | 16,793 | March | 11,046 |
| Aug. | 15,937 | April | 12,572 |
| Sept. | 14,392 | May | 12,544 |
| Oct. | 13,573 | June | 13,204 |

Week ended, 1941

| | | | |
|---|---|---|---|
| July 5 | 12,790 | Aug. 9 | 14,803 |
| July 12 | 11,955 | Aug. 16 | 14,655 |
| July 19 | 13,434 | Aug. 23 | 14,194 |
| July 26 | 13,407 | Aug. 30 | 13,384 |
| Aug. 2 | 13,428 | Sept. 6 | 13,710 |

# THE Editor's PAGE

*Readers Comments and Opinions will be much Appreciated by—WARREN C. PLATT, Editor and publisher, Penton Building, Cleveland, O.*

## Continuing Senatorial Probe May be Oil's Best Protection

AT LEAST the special U. S. Senate committee has taken some of the hysteria and politics out of the East Coast petroleum "shortage" in its preliminary report last week.

Also, the committee has brought forth at last from the Petroleum Co-ordinator's Office a long delayed statement of figures on which the Co-ordinator, presumably, was basing his recommendations and instructions, including the illegal order to arrest American citizens because their exhaust pipes smoked, or they started up their cars a little more rapidly than some cop might think was "constitutional".

On the basis of these figures developed by the inquiry, the oil industry will undoubtedly concur in the Senate committee's conclusions that what threatens the East Coast is—or was—a "shortage of surplus" and the cure, a necessary readjustment in transportation facilities.

Also, on the figures submitted by the government, the industry will undoubtedly concur in the conclusion that such shortage as exists or threatens can be early overcome—the committee says "immediately overcome"—by a greater and more efficient use of all means of transportation, all of which is now developing.

And most importantly, the industry will agree with the committee's recommendation that in view of the unknown factors before us, the industry and the country should join in "a sane and sensible and constant conservation of all petroleum products." Petroleum is too vital a war necessity, whether for supplying power to the Army or Navy or to American citizens for their daily living, to waste a single drop by either careless use or careless handling.

LET the oil industry pursue this cause of conservation in production, manufacture, handling and use of petroleum through its own effective organizations and in co-operation with all intelligent government effort. If the industry, through its own organizations, steps forward with such a program at once, there is less likelihood of such a program getting all gummed up with politics and the evils that such politics invoke.

### Senate Committee Invites Help of Oil Men

IN VIEW of the saneness of the Senate committee's investigation and the calmness of its first report, the closing comment of this report may turn out to be the most important idea it has developed up to now.

Says the committee,—

> "We have asked the Petroleum Co-ordinator, and the Director of Civilian Allocations, and the railroad officials, and oil company representatives, and the others who in any way, have a responsibility in connection with petroleum questions, to keep our Committee completely informed as to what progress is being made, and to keep us up-to-date on the oil situation. We have assurances of that co-operation. . . .
>
> "Our committee is in recess only insofar as hearings are concerned, and it is our intention to follow the oil situation closely—to make such study as is possible—to meet again if, as, and when the need appears—and to report to the Senate in more appropriate detail at a later date."

NPN has never much cared to see the oil industry under constant surveillance by any government body, with continual interference with the industry's operation. The industry has had too many unhappy experiences, fresh in most every one's mind, to need any citations of facts here.

But these are different times and a different group is in control at Washington, a group that has made many attempts to seize control over oil as well as other industries, a group that has carried on so-called investigations of oil that were merely opportunities for expounding their own totalitarian theories.

There also are in Washington today some officers, some appointees and some others, most easily classified under the term "bureaucrats", of doubtful legal standing and some of doubtful political honesty to say the least, whose chief purpose and even "duty" it is to try to direct and regulate and, if they can, control and operate the oil industry. For the most part these persons would deal directly with the oil industry and not through Congress or even by leave of Congress.

Now comes this Senate committee, that has done an intelligent job of investigating, compared with so many Senate committees of the past, and, in effect, says it will stand in between the oil industry and these officiating Washington groups and try to bring out the facts for all concerned. This Senate committee has no authority to regulate the industry or to direct the actions of the bureaucrats, but it has Constitutional authority to demand the facts at all times and of all persons and to bring those facts out in hearings that are public to everyone.

MAY not this Senate committee in its quest for facts regarding petroleum conservation from the well to the consumer, not be the best aid to both the industry and the public in these trying times?

One of the great difficulties of this country's war effort has been the lack of frankness on the part of high people who have—or presumably have—the facts.

It is doubtful if there would have been any great excitement over this East Coast oil "shortage" had the Co-ordinator given all his facts promptly and clearly to the industry and to the public—that is if he had the facts. If he did not have the facts, then he was not justified in making many of the statements he did, nor taking some of the actions he did. If the government officials had been required to report their facts currently and promptly, they probably would have been saved from themselves.

Many in the industry, including NPN in its editorial pages, have been requesting the facts from the Co-ordinator. But no one was able to require him to give them and no facts were forthcoming until this Senate committee WITH THE POWER began its investigation.

Actions have been taken by the Co-ordinator and his associates in OPACS, that inflicted damage on oil men and the public, some of which actions hardly seem justified. Those damaged are protesting; the Co-ordinator's people are investigating but in the meantime the damage has been and is being done. No one will recom-

pense those damaged, least of all the government.

WITH the government officials knowing that a committee such as this Senate Oil Shortage Investigating Committee, is constantly on the alert to bring out the facts and has the power to do so, it rather stands to reason that more care and more judgment will be used by these government officials in carrying on the duties of their offices.

As per the present War Defense set-up at Washington, there is practically no supervising authority to appeal to when things go wrong, except the White House and that is useless. Great wrong can be, and has been done but American citizens have had no redress. One can appeal to his individual senator or member of the House, but as an individual such men are practically helpless. But, in a group acting as a part of Congress, and seeking the facts, they are all-powerful in presenting any one's case to the great body of public opinion.

NPN suggests that oil men consider the value to each of them in this Senate Committee continuing actively in existence in order to be a means of getting the facts about this increasing relationship between oil and government; that oil men individually and through their associations might petition this committee to continue in existence and then oil men could help it to get the facts.

Granted that there will be a lot of foolish protests and probably untrue charges presented to such a continuing committee, nevertheless the good that such a committee can do will far outweigh any difficulties and embarrassment committee members may have in sorting the wheat from the chaff.

Undoubtedly every oil man, big and little, will feel free to present his ideas and protests to such a committee.

Such a committee will certainly be a true function of Democracy.

## Delving for Facts Will Protect Against Prosecutions

ANOTHER value to the oil industry of this petroleum Senate committee staying on the job is the probable protection it will offer against unfair prosecution by the radicals of the New Deal.

Such New Dealers will be less likely to fake another "Madison anti-trust" case, and there will be less likelihood of any government official, responsible with oil men for his acts, walking out on them as in the case at Madison.

Oil men may well view Petroleum Co-ordinator Ickes' "vacation" during this Senate Committee's hearings with some suspicion in view of their Madison experience. Here was the first opportunity for Ickes to tell "how well" he had performed his duties in "conserving petroleum", a subject that he had expounded on quite considerably, but though trains and planes were running, the Petroleum Co-ordinator was conspicuous by both his absence and his silence.

Deputy Co-ordinator and Oil Man Davies took the brunt of the investigation and did well by himself and his department, but many are the comments as to why his boss was not there. Is Ickes already trying to wriggle out of a seemingly hot spot and let Davies and the other oil men with him take all the blame?

WHAT some business men seldom learn is that a professional politician and officeholder has no scruples about how he stays out from under unpleasant responsibility and criticism. Anything is justified so long as the politician gets clear. It would be better for the oil industry if some oil men would learn from experience and be a bit more skeptical of some of their seeming friends at Washington and elsewhere.

This oil and government relationship of the moment is necessarily right down to what "affects price" and the New Deal's Supreme Court has ruled that most anything that "affects price" is illegal.

True, there is a procedure being followed whereby the head of the Anti-Trust Division of the Department of Justice seems to give his approval of certain oil acts, nevertheless that "approval" is always conditioned on a certain letter written in the spring on another matter. There are enough loopholes in the procedure so it would seem to be easy for the Anti-Trust Division to deny that it had "approved this" and insist that it had only "approved that" and let the jury decide.

WITH a Senate committee constantly delving into and bringing out the facts, there would seem to be less likelihood for any anti-trust prosecutions such as at Madison and elsewhere. Certainly there would be less opportunity for the Department of Justice and its "wonderful G-men, who always get their man" making the "discovery" of another "gigantic and secret conspiracy" that was recorded in the government's own records and reported by the press.

And there would be less chance of a responsible government official "walking out" on his own acts, for such a Senate committee would already have in its records, presumably, in response to the direct question, the answer as to whether such official knew of and concurred in and approved any specific act.

And it also might be easier to get these facts as gathered by the U. S. Senate before a jury, even if the Department of Justice (?) did not want those facts known.

## Make it Read: 'Despite the President'

WE wish oil men would not lapse into the bad habits of political officeholders when they too, hold office.

Deputy Petroleum Co-ordinator Davies, an oil man, said the following in his official comment on the report of the Senate committee,

> "Thanks to the program initiated in May by the President of the United States, the supply deficiency has been reduced."

We would say that it would be nearer the truth if that statement had read,

> "Despite the bungling efforts initiated by the President and some of his associates, the oil industry has been able to exercise at least some of its ability and ingenuity and has greatly reduced the danger of a shortage to its East Coast customers."

From all we know of what has been done to help the East Coast petroleum consumer, it is the oil industry that has done it; it is the oil industry that went ahead and put tank cars in crude service, that rearranged its river barge fleets, changed its tanker schedules and got a new ruling from the Maritime Commission for heavier loading of them. And it is the oil industry that is changing over some pipelines and willing to build others with its own money, if and when government says the word on steel priorities and now that government has given some proposed lines the right of eminent domain.

Again, let us have the facts.

# DEATHS

### Tom C. Johnson

Tom C. Johnson, 56, widely known oil man and industrialist, died at his Wichita, Kans., home Sept. 12. He was Kansas director for American Petroleum Institute and Mid-Continent Oil & Gas Assn., director of Independent Oil & Gas Assn. of America and the Kansas Independent Oil & Gas Assn. and served as vice-president of the A.P.I. at one time.

He was born at Attica, Kans., in 1885 and grew up in Wichita, center of the Kansas oil industry. A strong advocate of proration, Mr. Johnson is credited with obtaining conservation legislation for Kansas.

He leaves a widow and 2 daughters.

* * *

### Mrs. Edna Gienapp

Mrs. Edna Gienapp, 51, wife of A. C. Gienapp, secretary of Iowa Independent Oil Jobbers Assn., died Sept. 15. Besides her husband, she leaves a son, Robert, and 2 adopted daughters, Marion and Ruth.

* * *

### Louis Lawton

Louis Lawton, Cleveland, head of marine sales for National Refining Co., died Sept. 5. Prior to this connection with National, he was head of the Great Lakes Towing Co., Buffalo.

Mr. Lawton leaves his wife, Frieda S., 2 sons, Robert and Richard and a daughter Jean.

### R. L. More

R. L. More, 68, executive manager of the far-flung W. T. Waggoner Estate, died in a Vernon, Tex., hospital Sept. 6 after suffering a heart attack at his offices.

As manager of the Waggoner Estate, Mr. More was active in administration of the production and refining divisions of the Waggoner interests.

Mr. More joined W. T. Waggoner in 1903. He leaves his wife, a grandson and a sister.

# U. S. Lease-Lend Bid Invitations Open On Lube Oils and Grease for British

NPN News Bureau

WASHINGTON, Sept. 15.—Bids opened this past week on two U. S. lease-lend invitations for British. Bids called for lubricating oil and grease. Details follow:

Schedule LL-8633 called for following items which will be referred to below by item numbers: Item 1—Lubricating oil, M. 160, (CS. 1298), 307,560 gals.; Item 2—Lubricating oil, M. 220 Special (CA. 1410), 197,040 gals.; Item 3—Lubricating oil, C. 600 (CS. 836B), 128,880 gals.; Item 4—Grease, G. S. (CS. 881B), 300,000 lbs.

Unless otherwise specified, items are to be delivered F.A.S. vessel, New York harbor, during September or as promptly thereafter as possible.

New York Lubricating Oil Co.—Item 3, 48.75c per gal. Priority rating for cans and 10 kegs of 6D common wire nails needed prior to delivery.

Tiona Refining Co., Item 3, 44c per gal., F.A.S. Philadelphia, 45c per gal., F.A.S. New York City.

Jersey Standard—Item 1—in 2/5 gal. c/s, 42c per gal.; Item 2—in 2/5 gal. c/s 43c per gal.; Item 3—in 2/5 gal. c/s 49c per gal. and Item 4—in 6/10 lb. c/s, 11c per lb. Delivery during October and November.

International Lubricant Corp.—Item 2, 47c per gal. in New York City. Delivery to be made from 2 to 3 weeks after date of release. Delay due to securing cans. Item 4—.0875c per lb. Delivery 3 weeks from date of release.

Fiske Brothers Refining Co.—Offered a substitute for Item 4, called Alternate Grease, G.C., at .08c per lb. First delivery not to start until 20 days after receipt of shipping instructions.

Demarco Oil Corp.—Item 1, 42c per gal.; Item 2, 44c per gal. Can deliver in September-October provided containers made available through adequate priorities, otherwise for November delivery.

Battenfeld Grease & Oil Corp.—Item 4, packed 5 lb. cans .0745c, packed 10 lb. cans .0705c, packed 25 lb. cans .072c., delivery 30 days after receipt of order.

### Another Schedule Open

Schedule LL-8631 called for 14,700 bbls. of pale spindle oil. Following bids were made:

Jersey Standard—Grade 5(c) 14,700 bbls. at $7.56 per bbl., F.O.B. Baton Rouge, delivery October only, Grade 5(d) 2320 bbls. (max) $12.60 per bbl., F.O.B. Good Hope, La., delivery September-October.

Freedom Oil Co.—Grade 5(a) 1000 bbls. only at $13.86 per bbl., F.O.B. refinery at Freedom, Pa., in tank cars. No loading facilities on East Coast.

Demarco Oil Corp.—Grade 5(b) 6000 bbls. at $15.12 per bbl., Grade 5(c) 14,700 bbls. at $10.71 per bbl. and Grade 5(d) 14,700 bbls. at $9.87 per bbl. New York port bid upon.

## Bids on 795,100 Bbls. Of Oil Open Sept. 23

NPN News Bureau

WASHINGTON, Sept. 13.—Bid invitations on 760,000 bbls. of pool gas oil, BPM/D-Z, will be opened at U. S. Navy Dept. 10 a.m., Sept. 23, it was reported here today. This oil will be purchased with U. S. lease-lend funds for Britain. Schedule number is LL-8756.

Above is to be delivered in bulk, (full cargoes) F. O. B. tankers at works or tanks of oil supplier at U. S. East Coast ports, U. S. Gulf ports "and/or" Aruba, in quantities ordered during October. Pool gas oil specifications for this bid are Formula No. 215-P (Spec. No. 21), British Purchasing Mission D-2.

Also scheduled to open Sept. 23 are bids on Schedule LL-8730, calling for 35,100 bbls. of lubricating oil, to be purchased for British with U. S. lease-lend funds. This schedule calls for following:

Lube oil, pool high grade motor oil 11—14,100 bbls. and lube oil, pool grade transformer oil 24—21,000 bbls. It is to be delivered in bulk, F. O. B. tankers at works or tanks of oil supplier at U. S. East Coast ports "and/or" U. S. Gulf Coast ports in quantities ordered during October.

### Texas Gasoline

*Special to NPN*

HOUSTON, Sept. 15—Tank wagon price advances of 1c per gal. on third grade and 0.5c on regular and Ethyl gasolines throughout Texas were announced by The Texas Co., effective Sept. 10.

Gulf Oil Corp., same date, made similar advances in its tank wagon prices at a "large number of Texas points."

### Louisiana 'Distillate'

TULSA, Sept. 15—Standard Oil Co. of Louisiana has announced a 10c per bbl. advance, to $1.40, in its posted price for Cotton Valley, La., "distillate", retroactive to Sept. 1.

### Goforth Replies To Moorhead

TULSA, Sept. 15—Following letter has been sent by W. A. Goforth, Tulsa, president of Oklahoma Stripper Well Assn., to J. E. Moorhead, executive manager of Pennsylvania Grade Crude Oil Assn., in reply to an earlier letter from Mr. Moorhead:

**Mr. J. E. Moorhead, Executive Mgr., Pennsylvania Grade Crude Oil Assn., Oil City, Pennsylvania.**

**Dear Mr. Moorhead:**

I have your letter of August 26, 1941 in which you criticize the statement released by me as President of the Oklahoma Stripper Well Association to the Press and published in the NATIONAL PETROLEUM NEWS of August 20, 1941.

In arguing for higher Oklahoma crude prices I had no idea of disparaging the Pennsylvania Grade Crude Oil Association or any of its members. In view of the interpretation manifested in your letter above mentioned, I hereby withdraw same.

**Very truly yours**
**OKLAHOMA STRIPPER WELL ASSOCIATION**
**(S) W. A. Goforth.**

(For text of Mr. Moorhead's letter to Mr. Goforth, see NPN Sept. 3, p. 14—Editor).

## Commission Plans Special Hearings

*Special to NPN*

AUSTIN, Sept. 15—A series of special hearings has been announced by the Texas Railroad Commission for the following oil and gas field matters:

**Sept. 22.**—Special production rules for the Salt Creek area in Brown county.

**Sept. 22**—Repressuring the Akin, Dimock and Costley's Dodson, Glass and Oates leases and W. E. Production Co.'s Glass lease in the BBB and C survey A-28 in Wichita county.

**Sept. 22**—Field rule changes for the Rincon field of Starr county.

**Sept. 23**—Special rules for the Burns-Ragland pool of Young county.

**Sept. 23**—Application of Stanolind Oil and Gas Co. for permit to operate pressure maintenance project on the E. F. Cowden "A" 37 well in South Cowden field of Ector county.

**Sept. 23**—Special rules for the Burns-Larimore pool of Young county.

**Sept. 23**—Application of The Texas Co. to dually complete its George R. Phillips No. 1 well in the W. W. Hanks survey, Chapel Hill field, Smith county.

# Army to Use 6 Lube Oils

NPN News Bureau

WASHINGTON, Sept. 15.—Army now will use only 6 lubricating oils, under a program of simplification and standardization approved by the War Department's liquid fuels and lubricants committee, it was announced today. Army heretofore has been using lubricating oils throughout the S.A.E. range.

New all-purpose lubricating oils to be used by Army are:

**Gasoline automotive engines**—Grade 10 (navy spec. 1042) in winter and grade 30 (navy spec. 1065 or 3065) in summer.

**Radial gasoline or diesel tank engines**—Grade 50 (navy spec. 1100) in winter and grade 60 (navy spec. 1120) in summer.

**Diesel tractor engines**—Grade 10 in winter and grade 30 in summer (new army spec., approved Sept. 12, 1941. For basic details of this specification, See NPN Sept. 3 p. 14).

### Straight Mineral Lubes

Automotive and tank lubricating oils are straight mineral lubricating oils and will be bought under existing Navy Department lubricating oil contracts. Diesel tractor oil is a compounded lubricating oil which also could be used in automotive equipment, although the higher cost probably will preclude such use in peacetime.

Simplification and standardization of gear lubricants used by the Army is next on the liquid fuels and lubricants committee's agenda, to be followed with similar action regarding greases.

### Function of Committee

The fuel and lubricants committee, which was established last April by Under Secretary of War Patterson, consists of representatives of the various branches of the Army. Group is concerned with all petroleum products used by the Army, except gasoline and lubricants for aircraft. Its activities include simplification, standardization and promulgation of petroleum products specifications.

Committee in August approved an all-purpose gasoline of 80-octane grade A.S.T.M for use by the Army in the field. (See NPN Aug. 20, p. 11.)

### Set Quota Hearing Date

TULSA, Sept. 15—Kansas Corporation Commission meets at Wichita Sept. 23 to take evidence on which its October oil allowable will be based. Decks will be cleared at that time for quick action should the lower rail rates to the East coast create a new market there for Kansas crude.

# Marketers Urged to Join Move To Obtain Equipment Priority

NPN News Bureau

CLEVELAND, Sept. 15.—How all persons engaged in oil marketing can protect efficiency of their operations by a joint effort to obtain high priority ratings on their requirements of new and replacement equipment and materials, is being told in a series of NPN articles.

Speeding up the handling of petroleum products from refinery to consumer serves the national defense program, directly and indirectly, as was pointed out in NPN Aug. 20, page 13. This justifies a high priority rating on equipment needed to achieve this objective.

Suggestions as to going after a priority order on marketing equipment were given in detail in NPN Sept. 10, page 23, along with an outline of the type of data that should be included in a priority application.

Meanwhile, NPN is reporting week by week news developments in the priorities set-up from Washington. This week's issue contains a news report (page 22) on production, refining and transportation branches of the oil industry getting a blanket A-10 priority rating on equipment and materials for repairs and maintenance—but marketing was left out of this order.

This prompted NPN to call to the attention of all state jobber associations the need for joint action to obtain priority ratings on all equipment needed by marketers to keep their operations at top efficiency so as to meet all demands upon them.

Letter from NPN's Editor Platt to all jobber association officers, outlining the situation, follows:

**September 12, 1941**

**To the Presidents and Other Officers of All State Oil Jobber Associations**

**Gentlemen:**

I am addressing you collectively in order to save time, a desirable thing these days of quick war defense movements.

We would like to get at the FACTS as to Oil Jobbers getting—

a. Equipment of ALL KINDS, trucks, tanks, pumps, both for bulk plant and service station.

b. Petroleum products of all kinds.

At the moment, our chief concern has to do with the first classification,—equipment.

We hear that some Jobbers have been unable to get necessary types of marketing equipment; that other jobbers have had no difficulty so far and seem to have a fair reserve supply on hand. The larger oil companies tell us the same thing. All, however, anticipate increasing difficulty.

So far, the Petroleum Co-Ordinator has not obtained any Priority rating from OPM, or now SPAB, for Oil Marketing in general. However, some equipment such as trucks have been given fairly high priority ratings. Priority rating has just been issued for Oil Producing, Refining and Pipeline equipment, with the statement that SO FAR the requests for help in getting marketing equipment have been so few that PCO has been able to handle them individually.

However, September 10th, the new SPAB announced that ALL types of material needed in war defense would have to have a priority rating before a manufacturer could fill an order. That undoubtedly will cover all marketing equipment, at least that is made of metal.

The tendency in some quarters at Washington and, unfortunately, in some parts of the oil industry, is to look upon oil marketing, especially by the smaller oil companies, jobbers, and dealers, as having a somewhat unnecessary war defense function, to say the least. These persons are prone to decry the alleged superfluity of service stations, and even bulk plants, each critic taking the position that the "other" oil man is not needed in this defense set-up, but of course he—the critic—is much needed.

Such thinking and speaking, of course, is most destructive to unity in the oil industry as well as giving much aid and succor to those who would like to place Government in absolute control over the industry, including most especially oil marketing.

In Washington this June, when the Petroleum Co-Ordinator was just getting started, the writer informally submitted to Dr. John A. Frey, in charge of marketing for the PCO, and a man who has had a most intelligent and sympathetic understanding of oil marketing, especially by the smaller oil companies, the thought that the government in this war emergency should use every effort to help the oil marketer to maintain his facilities, be they bulk terminal, trucks or service stations, in the most efficient manner possible, to the end that he could move the most volume at the least possible cost.

The writer said that the government should not hesitate to support the manufacture and easy sale of all modern type of equipment and should not hesitate to try and get it adopted in place of obsolete as well as worn-out equipment. By thus putting and keeping today's facilities in the most efficient shape, the government eventually would see a larger volume of petroleum products distributed with the least possible installation of brand new facilities, and at an efficient cost that would tend to hold down prices to the consumer. Dr. Frey said there was much sense in the idea.

Now—today—it would seem to be desirable for the Oil Jobbers of the country to register this idea most definitely with the authorities at Washington, especially with SPAB, putting practically all metals under priority rating.

We suggest to you, a duly elected representative of oil jobbers of your state, that you particularly consider the advisability of the jobbers as such, as the smaller oil marketing companies, gathering the facts and formulating a policy with recommendations to be presented to the authorities at Washington.

We suggest that the jobbers consider doing this *as jobbers* because of the tendency in the average thinking throughout the entire War Defense effort, to forget the Small Business Man as any worthwhile factor in Defense.

The jobber who supplies but a few hundred farmers, but a few hundred trucks, perhaps a small war defense factory, maybe only gasoline to the cars of a couple of thousand workers in a munitions plant or perhaps only workers in a plant making an ordinary living necessity, is liable to be thought of as a NON-Defense factor, and his plant and equipment allowed to deteriorate as this defense effort grows.

In NPN of Aug. 20th, I ran an editorial of how this country's very life is dependent upon the free and wide distribution of petroleum products, not just by the big companies but also by the small companies. I pointed out how difficult it is to separate strictly necessary War Defense use of petroleum products from that use which is necessary to our living and which therefore is also War Defense use. I attach a reprint of that editorial from which, I believe, you or your attorney can get helpful ideas and argument in presenting any brief on this subject.

I also enclose a story from the Sept. 10 issue of NPN, telling just how to go about getting priority on marketing equipment. This story was written after checking it with the proper oil marketing priority authority at Washington so you can rest assured that it is correct at least as of that date, a few days before the first business meeting of SPAB. However, the procedure probably will not be changed by SPAB; the only question in SPAB's mind, being what, if any, PRIORITY RATING to give marketing equipment generally.

It is to be expected that the government, as well as every oil man, will not put up any new facilities of oil marketing unless they are absolutely required by the new communities established at munition manufacturing centers, and are called for by the increased gallonage.

However, it would seem to be only common sense, that a commodity as highly essential to the war effort both in the field and at home, as petroleum, should be handled with the least possible loss of the liquid itself as well as of the vapor, should be moved through storage and trucks to stations and the ultimate consumer in the maximum quantity possible per tank, truck, pump, and service station, and all at the lowest possible cost.

It also seems only common sense that the oil jobber be given the opportunity of getting the best equipment with which to maintain the cars and trucks of the country in the best running condition.

This is the story, I believe, the jobbers of the country will want to present to the proper authorities as soon as possible; a story to be presented by and on behalf of the jobbers, the smaller distributing oil companies, even though the same story is told by the major oil companies.

We, of NPN will appreciate your keeping us informed of any

Meetings you may call,

Resolutions you adopt,

Briefs or letters you may file in regard to these matters and which information will help the jobbers of the country to protect their own interests as well as to best serve their country.

Will you please keep us informed, and as quickly as possible?

**Very truly yours,**

**(s) W. C. Platt**

**Editor**

# WITH THE ASSOCIATIONS

## 'Gas' Curtailment is 'Unfair', North Carolina Jobbers Say

RALEIGH, N. C., Sept. 11.—Immediate action from Petroleum Co-ordinator Ickes to put all gasoline suppliers along East Coast on same basis as independent jobbers, "so that all will be subject to the same percentage reductions", is being asked by North Carolina Oil Jobbers Assn.

This request, in the form of a resolution was adopted at a special jobbers' meeting here today and resulted from charges that certain major suppliers and their commission agents "are selling to the essential commercial consumers unlimited quantities of gasoline". (Commercial consumers are entitled to get all gasoline supplies necessary to conduct their business. It should be noted that jobbers here say "unlimited quantities"—Editor).

**Barringer Presides**

In the absence of N.C.O.J.A.'s President C. B. Myers, C. M. Barringer, first vice-president presided at Raleigh meeting.

Following a discussion of what PCO was doing for jobbers, it was decided to send following men to Washington to confer with Mr. Ickes: Bruce B. Cameron, Wilmington, chairman; R. L. Brinson, High Point; Paul Bennett, Winston-Salem; Owen S. Robertson, Hillsboro, W. A. Parker, Raleigh, N.C.O.J.A. secretary, and T. W. McCracken, Henderson. Committee goes to Washington Sept. 17.

Full text of resolution follows:

"WHEREAS, the North Carolina Oil Jobbers Association is in full sympathy with the Petroleum Co-ordinator and his work in the national defense program, and wants to co-operate with him in every way possible, and

"WHEREAS, the major suppliers in their direct territory and through their commission agents, despite recommendation to the Petroleum Co-ordinator's Office to the contrary, are selling to the essential commercial consumers, unlimited quantities of gasoline, a portion of which is not delivered to consumer accounts, but instead goes to retail outlets, and

"WHEREAS, the independent jobber is limited to 90% of his July withdrawals from suppliers,

"THEREFORE, we feel in this emergency there should be no discrimination and that the little man should have equal consideration with the larger units of the petroleum industry.

"We humbly beg that steps be taken immediately to put all companies, major suppliers as well as independent jobbers, on the same basis so that all will be subject to the same percentage reductions of petroleum products."

### Phillips to Tell Advantages Of State Oil Control

NPN News Bureau

TULSA, Sept. 16. — Oklahoma's Gov. Leon C. Phillips, chairman of the Interstate Oil Compact Commission, and Under Secretary of Interior Alvin J. Wirtz, Washington, are featured speakers on oil at the American Bar Assn. convention at Indianapolis, Sept. 29 and 30.

Gov. Phillips will address the convention on "Advantages of State Control of the Petroleum Industry," and Mr. Wirtz will discuss "Problems Confronting the Petroleum Industry During War Times."

The mineral law division will be presided over by Alvin Richards, Tulsa, chairman of the section and counsel for The Pure Oil Co.

## Recycling Association Merges With Natural Gasoline Group

NPN News Bureau

TULSA, Sept. 15—The board of directors of Natural Gasoline Assn. of America last week approved creation of a new division within the association for the study of technical problems in high pressure gas operations, according to Ray E. Miller of Tulsa, Hanlon-Buchanan, Inc., association president.

E. E. DeBack of Corpus Christi, Tex., general manager of the Chicago Corp. and Coastal Recyling Corp., was elected new N.G.A.A. vice-president to head up this new division.

Discussion which led to the ultimate segregation of high pressure gas studies in a special N.G.A.A. division were begun last January with members of American Recycling Assn. of which Mr. DeBack is president. Since N.G.A.A. committee work on problems concerning high pressure gas testing and measurement duplicated work planned by the newly-organized A.R.A., it was concluded consolidation of A.R.A. with N.G.A.A. and creation of the new division with the latter association was the most practical approach.

**To Be Integral Part**

The new high pressure gas division is an integral part of N.G.A.A. and will have same headquarters as the association, although most of its meetings will be in cities central to the condensate producing and recycling areas. Its activities will be subject to the direction and supervision of the N.G.A.A. directorate.

Subjects to be studied by the new N.G.A.A. division include high pressure gas transmission problems, sub-surface flow conditions, methods for removal of salt and hydrogen sulphide from gases and study of liquid entrainment in high pressure gas streams.

### Gasoline Stocks Reduced By Gulf Coast Refiners

*Special to NPN*

HOUSTON, Sept. 15—Gasoline stocks at plants of 11 Gulf Coast Refiners Assn. members were reduced 239,242 bbls. during the last half of August, G.C.R.A. reports.

Aviation gasoline stocks Aug. 31 totaled 344,870 bbls., up 27,261 bbls. from Aug. 15; motor fuel stocks 983,772 bbls., down 159,701; naphtha, 175,764 bbls., down 106,802 bbls.

Crude runs averaged 99,253 bbls. daily, down 1467 bbls. or 65.9% of rated capacity.

Kerosine, diesel gas oil and No. 5 fuel oil stocks were reduced, with increases reported in inventories of diesel fuel oil, Bunker C fuel and "all other types of gas oil."

## Texas Jobber Group To Make New Appeal For Price Increase

*Special to NPN*

SAN ANTONIO, Tex., Sept. 15.—Since Gasoline Jobbers & Refiners Assn. of Texas has received no direct reply from its latest wire insisting on a 1.5c per gal. increase in Texas tank wagon price for third grade and 1c advances on regular and Ethyl gasolines, M. S. Stout, association president, will leave for Washington today to make a personal appeal to Price Administrator Leon Henderson for wider jobber margins in Texas.

Recent tank wagon price advances of 1c per gal. on third grade and 0.5c for regular and Ethyl in Texas failed to relieve independent jobbers now operating under unprofitable margins, Mr. Stout said.

**'Where We Started From'**

"And then we're right back where we started from."

"We insist on tank wagon price advances as follows: third grade 1.5c per gal., regular gasoline 1c, Ethyl 1c, so that these independents will be able to operate," the G.J.R.A. wire to Mr. Henderson urged.

"Reason for this telegram is all our letters to you we get no satisfactory reply . . . we are waiting a reply from your office for immediate relief," it concluded.

### Donahue Claims Rationing Hurts Defense Effort

NPN News Bureau

CLEVELAND, Sept. 15 — Manufacturing plants in Pittsburgh's industrial area will be handicapped by continuance of gasoline rationing, said John H. Donahue, Pittsburgh, president of Associated Retail Gasoline Dealers, Inc., in a statement to the press today.

Mr. Donahue declared the public must be given, without delay, a clear picture of the gasoline situation which will form "a consistent and logical pattern in their minds" without the present confusion over contradictory and inconsistent figures given out by individuals who are not familiar with the whole picture of the gasoline industry.

# 3 Branches of Oil Industry Get A-10 Rating for Repairs

NPN News Bureau

WASHINGTON, Sept. 15.—Inclusion of petroleum production, refining and transportation in a blanket A-10 preference rating order, No. P-22, to "facilitate acquisition" of materials and equipment needed for repair and maintenance, means that oil companies in these branches will no longer have to apply individually for a priority rating when they are unable to obtain such equipment without a rating.

Oil companies in these branches—instead of applying individually on a PD-1 priority application form and then taking the approved PD-1 form to the manufacturer or supplier specifically named therein—will now simply note on their purchase orders:

"Purchase Order for Repair or Emergency-Inventory-Preference Rating A-10 under Preference Rating Order P-22."

This preference for materials needed for repairs and maintenance includes "any commodity, equipment, accessories, parts, assemblies, or products of any kind."

Supplier from which the oil company has ordered the equipment is entitled to endorse an A-10 rating on suppliers purchase order for any materials needed to make such equipment.

**Marketing Not Covered**

(Oil marketing is *not* covered in the P-22 order—only production, refining and transportation. Marketing companies needing equipment and materials must apply on PD-1 form, a facsimile of which was printed in NPN, Sept. 10, page 23.)

A-10 rating is not supposed to be used unless the material or equipment to be delivered cannot be obtained when required without such rating.

For repair parts and equipment, persons operating in the production, refining and transportation branches will use the PD-1 form only when the A-10 rating proves insufficient. Then, the PD-1 form is to be filled in with complete detail as to efforts to obtain the material under the A-10 blanket rating, along with date when materials must be delivered, their use, and quantities of such materials normally carried in stock.

Should there be an unexpected breakdown and the oil company cannot obtain repair parts immediately under the A-10 rating, the company should ask its supplier what higher rating is needed in order for the purchaser to get delivery and then telegraph Washington, giving details.

These communications, like all others pertaining to priorities for oil industry purchases, should be addressed to:

**James E. Hughes,**
**OPM Priority Representative,**
**Office of Petroleum Co-ordinator,**
**New Interior Department Building,**
**Washington, D. C.**

The P-22 order went into effect Sept. 9, 1941 and expires Feb. 28, 1942. It is subject to amendment or revocation at any time. It carries heavy penalties for false statements in application or records.

Only conditions attached to use of the A-10 rating are that it must not be used to obtain material in excess of requirements or in excess of amount necessary to make rated deliveries; nor is it to be used if the material can be obtained without a priority rating.

Besides petroleum production, refining and transportation, other industries covered in the P-22 order giving blanket A-10 rating to maintenance and repairs equipment included: Chemicals, metallurgy, research laboratories, rubber and rubber products (including synthetic rubber) and explosives.

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# Truck Group Seeks 40c Minimum Wage

NPN News Bureau

WASHINGTON, Sept. 15.—Establishment of a 40c per hour minimum wage rate for workers engaged in interstate truck transportation is recommended in a report filed this past week with Gen. Philip B. Fleming, Wage-Hour administrator, by Property Motor Carrier Industry Committee. The industry employs around 600,000 workers, of which approximately 70,000 would receive pay increases if Wage and Hour Division gives approval. Truck lines in the South reportedly will be affected most.

The property motor carrier industry is defined as follows:

"The industry carried on by any person who holds himself out to the general public to engage in, or under individual contracts or agreements engages in, the transportation by motor vehicles of property in interstate commerce, or in the transportation by motor vehicle of property necessary to the production of goods for interstate commerce over regular or irregular routes. The term includes the industry carried on by any person who as agent or under contractual arrangement with any rail, water, or motor carrier or any express company engages in the performance within terminal areas of transfer, collection, or delivery services. The term does not include that part of the industry carried on by any carrier by rail or water or by any express or other company which is subject to Administrative Order No. 34 defining the Railroad Carrier Industry."

**More Oklahoma, Illinois Oil To Move East by Rail**

TULSA, Sept. 15. — Approximately 3000 bbls. daily of crude are scheduled to begin moving by rail today from Oklahoma City to Socony-Vacuum's Paulsboro, N. J., refinery. The crude will probably move out on a $1.30 per bbl. rail rate. Since loading rack facilities at point of origin will accommodate only 15 tank cars, shipment will be offered rails in that amount rather than in trainload lots.

On the same date, 5000 bbls. of Illinois crude will be moved daily by rail to New Jersey Standard refineries on the East Coast.

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# May Hike Reduced Rail Rates If Railroads Advance Wages

NPN News Bureau

WASHINGTON, Sept. 13.—Possibility that reduced rail rates on petroleum and its products, due to go into effect Sept. 15, will be advanced, was seen this week by an official of the Assn. of American Railroads, who told NPN that such an advance hinges on outcome of present demand of railroad employes for increased wages.

If railroads are forced to increase wages, and this was seen as a likely possibility, it follows that this money will have to come from advanced rail rates, this A.A.R. spokesman said, pointing out that in the case of the 25% flat reduction on rail rates for refined products, the present rate had been approved by Interstate Commerce Commission "and you can bet the ICC did not approve a rate that allowed us a 25% profit. If we had been getting a 25% profit, we'd be rolling in clover." The trouble with railroad employes and the public is that they assume railroads are making a lot of money, this spokesman said.

**Reached 'Rock Bottom'**

Railroads have reached "rock bottom" as far as rail rates on refined products are concerned, NPN was told. This A.A.R. official had been asked what attitude he thought railroads would take on Sept. 9 letter from Paul Hadlick, secretary of National Oil Marketers Assn., to Chairman Maloney of Senate committee, investigating oil "shortage" on the East Coast. Mr. Hadlick asked why rail rates on refined products "particularly fuel oils" could not be reduced 50% as in case of crude rail rates.

(*For additional comment by Mr. Hadlick regarding tank car and tank wagon prices to Chairman Maloney, see NPN, Sept. 10, p. 8—Editor.*)

Office of Price Administration had no comment regarding the rail rates on petroleum and its products.

The bases for the reduction on crude and refined petroleum products, effective Sept. 15, states ICC, are as follows:

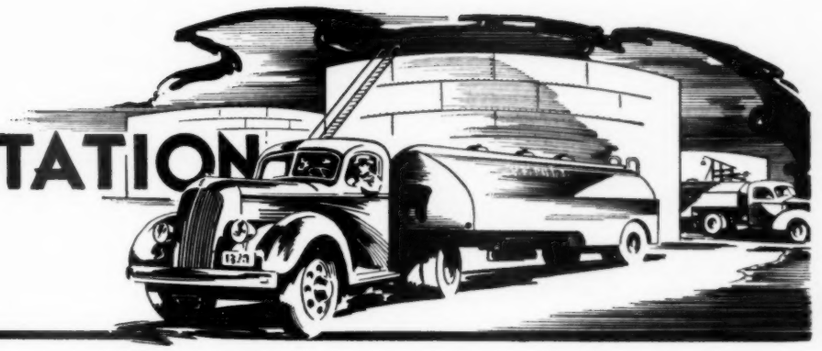
"On crude petroleum, 13% of the applicable first-class rate from and to the same points, applicable only on shipments in tank cars, minimum weight the gallonage capacity of the tank car, using an estimated weight of 7.4 lbs. per gal. Although this basis is authorized generally, it is understood that there will be no general publication but that individual rates will be published from time to time as need arises.

"On refined petroleum, including gasoline but not lubricating oils and greases or liquefied petroleum gases, 25% reduction in the existing normal rate. Where depressed rates to meet motor, water or pipe line competition are now in effect, such rates will not be reduced unless the 25% reduction applied to the normal rates results in lower charges. The rates are to apply only on shipments in tank cars, minimum weight the gallonage capacity of the tank car, using an estimated weight of 6.6 lbs. per gal.

"On fuel oil the same as on refined oil except that the estimated weight to be used is 7.4 lbs. per gal."

Should such difficulties arise, ICC indicates it may reconsider "the grants of relief, or may recommend to the commission entry of emergency service orders as to routing to avoid wasteful transportation or other appropriate action. . . ."

# OIL TRANSPORTATION



## Two Suggestions Advanced To Raise Tank Car Supply

NPN News Bureau

TULSA, Sept. 15. — While testimony before the Senate Oil Shortage Investigating Committee swayed back and forth this past week over the rails' ability to meet the East Coast transportation shortage, two oil men advanced suggestions for increasing availability of tank cars.

George A. Hill, Jr., president of Houston Oil Co. of Texas, proposed in a letter to Acting Petroleum Co-ordinator Davies that the government purchase all federal petroleum products requirements FOB refinery, furnish the necessary tank car transportation and pay the freight thereon.

James F. Lawrence, Tulsa, oil transportation counsel, proposed that the government subsidize oil companies 2c per gal. on all-rail shipments and that the average tank car mileage be increased.

Mr. Hill said his plan would solve certain economic problems arising with utilization of tank car shipments in conjunction with lower-priced transportation. To have the government buy its petroleum requirements FOB and handle its own transportation would safeguard and prevent "undue hardship" to business enterprises and consumers generally, he said.

"It will eliminate the problem of allocating these excessive costs, if any, through some impossible private pooling arrangement which would also doubtless be illegal.

"It will start at once the flow of gasoline and petroleum products to the eastern seaboard.

"It will enable the purchase of large quantities and the shipment to fewer destinations of the gasoline and petroleum products so purchased," Mr. Hill stated.

In addition, he said, the plan would simplify the rate question in that rails will have to deal with only one entity—the federal government. Low rail rates offered the government for movement of volume lots could be disposed of after the emergency "without any selfish interest being involved," the Texan said.

Mr. Lawrence said tank cars available for use to the East Coast can be increased from 20,000 to 50,000 if the average daily mileage traveled by tank cars is increased.

"Today the average daily mileage of tank cars will run less than 50 miles and if the emergency is pressing, that mileage can be increased to 200 miles per day without any serious interference with the normal operation of the railroads. Every time the daily mileage of a tank car is doubled, this in effect produces a surplus of tank cars since there are admittedly approximately 20,000 idle tank cars under present operating system. This surplus can be increased to 50,000 surplus tank cars almost immediately. If the U. S. government will agree to subsidize the major oil companies 2c per gal. on all-rail shipments, which approximately represents their net advantage in transportation costs through the use of their own private facilities, no doubt the railroads would haul and the Atlantic Seaboard would receive an abundance of oil."

Mr. Lawrence said the shortage of tank cars that is being so freely discussed now is but a repetition of what happened in the first World War. At that time the industry and government devised a plan of speeding up tank cars on the theory that to double the efficiency of a tank car would in effect double the number of tank cars available. After this plan was placed in operation, "the daily average movement was increased enormously and within 3 weeks the tank car shortage disappeared and deliveries to the Atlantic Seaboard met all the requirements," Mr. Lawrence said.

★ ★ ★

## Thompson Applauds George Hill's Plan

*Special to NPN*

AUSTIN, Sept. 15. — Railroad Commissioner Ernest O. Thompson Saturday took time out from fighting Louisiana mosquitoes and the Blue army to applaud the suggestion of George A. Hill, Jr., president, Houston Oil Co. of Texas, that the federal government use the railroads to transport oil to the East Coast.

Col. Thompson, in high good humor after his regiment's anti-tank gunners knocked out 19 of an attacking force of 20 tanks and forced the other one to flee, called up Austin news bureau reporters on a conference telephone call to commend Mr. Hill's plan.

"Since the government has taken away the ships (to transport oil to Britain), it seems to me that it should use the rails to move oil in the United States, even if it is more expensive," Col. Thompson said. "I think Hill has made a great suggestion."

Col. Thompson, since his induction into active duty with the Texas National Guard, has been carrying on his railroad commission business mainly by long-distance telephone. Since the biggest part of the Army maneuvers are being held in Louisiana, Col. Thompson has had to come to the little Texas border town of Teneha to sign official papers, etc.

Col. Thompson is commander of the 141st Infantry, and said that charging enemy tanks hold no terror for his boys. "They're used to popping squirrels out of the tops of tall pecan trees," he grinned, "and a target as big as a tank is duck soup for them."

### Postpone Rail Rate Cut

TULSA, Sept. 15—Reduced rates on petroleum products rail-shipped from St. Paul, Minneapolis, Duluth, Superior, Rock Rapids, Sioux Falls and Sioux City terminal points inland to destinations and originally scheduled to take effect Oct. 10 have been postponed to Oct. 15. (See NPN Sept. 10 p. 18—Editor).

### Propose Lower Minimum On Tank Car Weights

TULSA, Sept. 15—Recognizing the shortage of 10,000-gal. tank cars, Central Freight Assn. has approved proposal to eliminate the provision for minimum weight of 74,000 lbs. in connection with rates on crude, topped or reduced crude shipped between points in C.F.A. territory. Shortage of 10,000-gal. cars, with their payload of 74,000 lbs., places shippers who must utilize 8000-gal. cars at a decided disadvantage, it was said.

Other rail bureaus, including Southwestern Freight Bureau, are considering same action. S.W.F.B., however, is considering suggestion that crude oil shipments in 8000-gal. cars take a rate 115% of that for shipment in 10,000-gal. cars.

### Truck Competitive Rate Approved by ICC

WASHINGTON, Sept. 15.—Truck competitive rate of 11.5c per 100 lbs. on gasoline and refined oils, in tank cars, from Baltimore to Martinsburg, W. Va., has been authorized by the Interstate Commerce Commission. Former rate was 14c. (I & S No. 4884.)

ICC also has approved for the same products from Baltimore to Martinsburg, tank truck rate of 11.37c per 100 lbs. charged by Theodore H. Compton. (MC-C-255.)

## ICC CALENDAR On Oil Trucking

**ICC DECISIONS**

**Carl Jorgenson,** Oelwein, Iowa, (MC 89104, Sub.-No. 1). Operation by applicant as a contract carrier by motor vehicle of lubricating oils and greases from Chicago, Oelwein, over irregular routes, found not consistent with the public interest or the national transportation policy. Application denied.

**Manzanola Transfer Co.,** Manzanola, Colo. (MC-2220, Sub.-No. 4). On reconsideration of findings in prior report amended so as to authorize applicant to operate in interstate or foreign commerce, as a common carrier by motor vehicle, over regular routes, (1) from Denver to Walsenburg, Colo., (2) from Burlington to Sheridan Lake, Colo., (3) from Halford to Garden City, Kans., in connection with the authority granted in the prior report to transport petroleum products in bulk from certain Oklahoma and Kansas points to certain points in Colorado over regular routes.

# Anderson-Prichard Upheld In Cracking Process Suit

NPN News Bureau

CLEVELAND, Sept. 15.—The U. S. Circuit Court of Appeals in Oklahoma has affirmed the judgment of the district court that Anderson-Prichard Refining Corp., Oklahoma City, is not infringing the basic Otto Behimer cracking patent held by The Texas Co.

The court held substantially that the Behimer patent covered cracking essentially in the drum, while the Anderson-Prichard Co. was cracking in the coil of the process unit.

This decision, handed down on Sept. 2, is the second in the past few weeks against major licensors of pyrolytic cracking processes. July 24, in U. S. District Court in Chicago, Judge William H. Holly dismissed a suit brought by Universal Oil Products Co. against Globe Oil & Refining Co., holding that Globe had not infringed the basic Dubbs cracking patent. (See NPN July 30, p. 15.)

**Possible Importance Cited**

These 2 decisions, some authorities believe, may have an important bearing upon the basic patents in the cracking field, and the extent to which pyrolytic cracking with recycling may be open to all refiners. In both decisions the courts placed limitations on the valid claims of the basic patents. In the case against Globe, that company was held not infringing, because, in its process, vaporization took place in the cracking coils, while the Dubbs patent was held to define vaporization as taking place in the vapor chamber. The Oklahoma court upheld the decision of the trial court that the omission of the step of cracking in the drum, in the Anderson-Prichard process, and substituting therefor cracking in the coil, clearly avoided infringement of the Behimer patent.

The suit against Anderson-Prichard, operating a 5000-bbl. cracking plant at Cyril, Okla., was filed in U. S. District Court in Oklahoma in June, 1933. Judge T. Blake Kennedy handed down his decision March 7, 1940. (See NPN, March 13, 1940, p. 9).

A defense group of refining companies, known as the Winkler-Koch Patent Co., raised a fund of $1,000,000 for the expenses of the trial in the Oklahoma court, according to a memorandum of Judge Kennedy. Members of the group, in addition to Anderson-Prichard, were Champlin Refining Co., Globe Oil & Refining Co., Skelly Oil Co., Rock Island Refining Co., Omar Refining Co., Root Refining Co. and Cities Service Co.

**Cites Texas Claim**

The decision of the U. S. Circuit Court of Appeals, (Judges Phillips, Bratton and Murrah) delivered by Judge Phillips, set forth, from the brief of The Texas Co., the typical claim under the Behimer patent as follows:

"A process of cracking oil which comprises:

(1) subjecting oil in a fired heating zone to a cracking temperature solely by the application of external heat,

(2) delivering the highly heated oil into a heat insulated zone where separation of vapors from residual oil takes place,

(3) discharging the residual oil.

(4) subjecting separated vapors to partial condensation to separate out the heavier constituents thereof as a condensate,

(5) removing uncondensed vapors,

(6) and positively returning condensate unmixed with residual oil by maintained mechanically applied pressure to the heating zone for further treatment, and

(7) continuously supplying charging stock to the process."

**'Pressure a Small Factor'**

One important finding in the decision was the statement that pressure as such is not an important principle to the cracking reaction, but is utilized mainly for mechanical reasons. On this point, the court said:

"In the vapor phase or liquid-vapor phase oil cracking process, pressure does not affect either distillation or cracking. Many such processes operate at low pressures. As vapors form in the cracking coil they cannot escape but travel along and are cracked with the liquid. Pressure has no relation to the cracking operation itself but merely serves to economize on the length of the coil by compressing the vapors into a smaller space.

"On the other hand, in drum

(*Continued on Page* 42)


# IGNORANCE of the "law" is no excuse

THIS isn't "scare" copy for you oil men. It's plain fact. *Right now* . . . with a steady stream of recommendations, tentative plans, and even orders coming from Washington . . . well . . . it's like the old NRA code days. These "requests" are practically "law"!

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# The Future

# For the Independent Oil Jobber

JOBBERS

Missouri

Florida

Minnesota

Kentucky

Michigan

Maryland

Washington



**Future of the Jobber in Oil Industry is Assured As Economic Necessity, Says Warren C. Platt**

THE Independent Oil Jobber is a hardy individual. Surviving a hundred gloomy predictions, overcoming all obstacles, the Jobber grows in numbers, prospers. Today, he's more firmly entrenched than ever. His gallonage in many states is expanding faster than his major competitors'.

But the Jobber's position has been misunderstood. Some in the industry have not fully appreciated the indispensable function the Jobber performs in distributing Oil's products to millions of customers daily. The Jobber, himself, has not always been aware of his own importance. Scattered over every state, the Jobber has had little chance to weigh his collective worth. Yet there is a proud story of achievement to be told. And now it is being told, authoritatively and completely in book form.*

Drawing upon his acquaintance with thousands of jobbers and his 33 years of close contact with oil industry's developments, Warren C. Platt, NPN's editor and publisher, has just written "The Future for the Independent Oil Jobber."

THIS book is more than a history of the Jobber's ups and downs since 1909 when Mr. Platt became secretary of the first national association of independent marketers. It is an analytical study of the Oil Jobber's function. From this analysis, the author is able to point out why the Jobber has gained ground, why he will continue as a necessary part of the oil industry's set-up no matter what changes the future may bring.

Condensed chapters from Mr. Platt's book will be published in NATIONAL PETROLEUM NEWS during the next several weeks, beginning with this issue. On Page 26, there is a condensation of the book's discussion, "Definition of an 'Oil Jobber' ". Another will be published next week.

*"The Future for the Independent Oil Jobber", by Warren C. Platt, Editor and Publisher of National Petroleum News, price $2, published by National Petroleum Publishing Co., 1213 West Third St., Cleveland, Ohio.

JOBBERS

North Carolina

Virginia

Utah

North Carolina

North Carolina

Illinois

New Jersey

# Platt Defines 'OIL JOBBER'

THE Independent Oil Jobber is an individual, or he may be a group of home-town individuals in a local corporation, who owns and operates a business distributing part or all of a general line of petroleum products. One Jobber, or company, may put emphasis on the sale of gasoline while another specializes on lubricating oils or fuel oils; one such Jobber may own and operate service stations while another leases his stations, and still another may devote most of his attention to the farm trade.*

But whatever the detailed variation in the type of their businesses may be, these local oil Jobbers own distributing facilities of such size as to receive large volume shipments direct from refinery or marine terminal. This means that these Jobbers own from one to a score or more tank car bulk plants, or one or more barge or marine terminals, or strings of service stations so equipped as to receive petroleum in large bulk quantities or in tank truck transports. Whatever they may be, these receiving facilities are large enough to unload and store petroleum products shipped by tanker, tank barges, tank cars or transport tank trucks.

These Jobbers are necessary to receive petroleum products at the end of the lowest-cost bulk transportation and there to break up the shipments into the smaller quantities required by the consumer. This break-up may be into tank truck delivery or into drums or cans, or by delivery direct to the consumer's automobile tank from the vending pump. Whatever is the quickest and cheapest transition from bulk to the quantities used by the ultimate consumer, the Jobber performs.

In addition to making the physical break-up from bulk into consumer

(*Continued on Page* 30)

*Condensed from "The Future for the Independent Oil Jobber" by Warren C. Platt (See Page 25).

A good example of an Independent Oil Jobber is the Quality Oil Company, headquartered in Winston-Salem, North Carolina. It is a partnership of Paul Bennett (brother of the late Bert Bennett) and the Glenn brothers, Joseph, James and Archie, nephews of Mr. Bennett. Quality Oil has 7 bulk plants and operates in 15 North Carolina counties. Annual gallonage: Approximately 12,000,000.

Quality Oil has 18 company-owned stations and 7 dealer outlets in Winston-Salem, alone. Its gallonage not only tops any other marketer's in that city of 80,000, but is reported to be more than the combined gallonage of the next two largest-selling brands in Winston-Salem.

Pictured here are some of the new service stations built by Quality Oil in Winston-Salem during past two years. One of these combines an office building and bulk plant with 70,000-gallon underground storage.

Appearance of these stations and quality merchandising are the principal reasons for the company holding its trade against an influx of new, price-selling competitors, says Mr. Bennett. He declines to reveal total number of retail outlets, but says Quality Oil has installed 724 gasoline pumps at these outlets. Quality Oil carries its own charge accounts, issues its own credit cards.

Supplies are brought to bulk plants in seven 4000-gallon transport trucks (6 of them pictured on this page) hauling from an ocean terminal at Wilmington, N. C., 200 miles away. These trucks make the 400-mile trip daily, unloading at bulk plants from which deliveries are made by a fleet of smaller trucks.

Quality Oil has its own shop (pictured on left-hand page) where tractors, trailers, tanks and motors are kept in A-1 condition. Pictures also show a new tractor unit being lettered and prepared for installing diesel engine (5 of the trucks shown are diesel-powered).

Pictured at top of this column is J. W. Wilkinson, Quality Oil employe, who designed three of the stations on this page, and others built by this jobbing company in recent years.

**A printed receipt of exact gallonage delivered—and no disputes or shortage claims!**

# Loading rack meters

Loading rack metering by RED SEAL Print-O-Meter at the New York City plant of Metropolitan Petroleum Corporation.

NEPTUNE RED SEAL METER CO.

# NEPTUNE RED SEAL METERS

*NEPTUNE METER COMPANY—Main Office, 50 W. 50th St., New York, N. Y. Or any branch office: Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, Los Angeles, Louisville, Philadelphia, Portland (Ore.), San Francisco, Toronto.*

# ...saved me 25,000 gallons IN ONE HEATING SEASON"

**This report from an eastern fuel-oil dealer may indicate why some 65% of the fuel-oil distributors in his section of the country *meter* their loading-rack fills. With a consequent saving estimated as huge as 6% on all oil sold! Gasoline savings from loading rack meters are comparable. Bulk plants straining to eliminate wastes can start at no better place than the loading rack.**

**Metering Pays!**
CONTROL—SAVE—PROFIT
by Meter Audit

The smallest shrinkage is important, these days. Accuracy of product measurement—insured only by metering—becomes doubly essential.

### *How Close is Meter Accuracy?*

A Minneapolis operator tells this story: "When our (RED SEAL) meter first was set in service on the loading rack, the truck drivers complained that it was throwing short—they were not getting their trucks filled to the calibration markers." The plant arranged an official test of the meter by the Minnesota State Sealer of Weights and Measures . . . and "found on two 100-gallon tests that it was less than 1 pint short on both tests." The plant operator pointedly remarks: "The value of the meter to this plant is obvious."

Seldom is meter accuracy questioned. A RED SEAL user in Illinois makes the typical assertion:

***"We have no worries as to the number of gallons of gasoline that leave our bulk plant, and no one's tank truck—regardless of the capacity of the compartments—holds any fear for us. We have found we can rely on these meters exactly to the pint, and have been able to detect discrepancies in various tank truck capacities. Our dealers find that they too can rely implicitly on the accuracy of the net contents of each load of merchandise that is delivered to them."***

One fuel-oil distributor states candidly that if he tried to maintain anything like the same accuracy without meters, the cost would be many times larger in time and manpower, not to mention the cost of checking drivers and the executive and supervising time spent.

### *Metering vs. Loading by Eye*

Consider unmetered loading. For the sake of the argument, let us assume an exactly correct calibration of the truck tank—without compartment bulge or distortion; also an accurately calibrated marker inside the manhole. We will suppose, too, that truck and tank rest absolutely on the level—no soft tires, weak springs, defective tank mountings...nothing to make the tank uneven.

Now, while completing the fill, try to see just how small a measurement of oil (or gasoline) you can read on the marker. Tests indicate that, under the closest scrutiny, one gallon shows to the eye no appreciable difference whatever in the liquid level, with many types of tank construction.

On the other hand, loading by modern metering gives *precision* measurement. It recalibrates each compartment at every tank fill and thus prevents serious, cumulative errors.

### *Protects Plant from Many Losses*

Besides preventing "unaccounted-for" outages, fraud, and carelessness in overfilling and spillage, loading-rack meters help spot leakage and wastes in plant storage and transfers—by affording an accurate checking of sales against receivals. Loading and yard traffic, too, are speeded. Accounting is simplified . . . RED SEAL ticket-printing meters provide all records needed in accounting for each sale.

### *Approved by Customers*

The customers are protected as well. When the loading rack is metered, no customer is penalized when he returns with say 1½ gallons still in his truck. He pays only for the gallonage he receives. There are no disputes—no misunderstandings.

"We consider our investment in these (RED SEAL) meters to have been a wise one," says a Michigan bulk plant operator, "and feel they are very important in holding down shortages." Bulletin 591 tells how the amount of investment is returned ten-fold, in continuous dividends. For your copy, address any Neptune office.

**GASOLINE DISPENSING PUMPS • METERS FOR: BARGE AND TANK CAR UNLOADINGS, STOCK TRANSFERS, LOADING RACKS, DELIVERY TANK TRUCKS**

1744

quantities, the Independent Oil Jobber *manages* this wholesale-retail operation. (He is responsible for the friendly relationship with the ultimate consumer that is necessary for profit.) He transacts or supervises all the small details of this relationship with the oil industry's final customers. If final delivery is through a dealer, or retailer, it is the Oil Jobber who sees that that individual retailer does a job that is satisfactory not only to the consumer and to the Oil Jobber himself and to the refinery supplying the products, but the Oil Jobber also sees that that dealer functions to the dealer's own personal profit.

This local Oil Jobber may fit his business into the marketing plans of a national brand oil company, or into the master trademark sales plan of a group of Jobbers, or he may conduct his business entirely alone and independent from all others, using his own brands and sales plans.

But this is same distributing function served by division, district and bulk plant managers of the major oil companies. So, there arises the question:

IS THE JOBBER A SURPLUS "MIDDLE MAN" OR IS HE ECONOMICALLY NECESSARY?

If we look at oil history and study the true functions and service of the Independent Oil Jobber, we will see that there is an ultimate, sound economic reason that justifies—yes, makes necessary—the Jobber's existence. It is a reason so strong and fundamental that it not only brought the Jobber into existence but has caused him to grow in size and numbers and to prosper. And this reason is entirely apart from any changing detailed character of the distributing facilities which the Oil Jobber owns or operates; a reason that exists whether there are bulk plants or not and whether products move direct from refinery to final outlet or not.

THE Jobber is the answer to the problem that large oil companies and great manufacturing concerns have struggled with unsuccessfully for years. It is:

> The inability—yes, the impossibility—of a few men to direct from a central source the minute-to-minute activities of vast aggregations of men scattered over great areas—that is, to direct the thousands of men who, each as an individual alone "at the point of sale," must serve the products of industry to the ultimate individual consumer.

A few men economically can regiment machines by the thousands to their absolute bidding and to a fraction of a cent of planned cost. But man has not yet found a way to manage successfully a wide-flung direct employe sales and delivery organization (company owned and operated type), that is in constant contact through its own small outlets with millions of free Individual customers.

Man has not yet found out how to operate such a single, all-employe organization as efficiently and as SATISFACTORILY TO THE CUSTOMERS as when these small final sales units are grouped under the personal ownership, direction or management of a final boss; a boss who can make instant decisions on important matters without having to refer them to a superior, or to a committee or board of directors hundreds of miles away.

Man has not yet found a form of management that is so sensitive to mistakes of judgment as is the owner of the business, who is immediately penalized for his mistakes by loss of compensation (losses) and who is immediately rewarded with additional compensation (profits) for his wise decisions and diligent efforts on behalf of the ultimate customer.

BIG Business and the major oil companies have tried managing the delicate relationship with the ultimate, individual customers of their products, but the trend now seems to be away from the direct supervision of that relationship from a far-away headquarters.

The quick and even unexpected decisions which have to be made at point of contact and the supervising of those decisions, are being left as close to that point as a business enterprise can obtain competent managing ability to work there. That is MANAGEMENT, decentralized.

MANAGEMENT is that elusive faculty which some human beings have and many others do not have. It is a faculty that takes equipment and men and investment, and produces customer-service, employment for those who have to work and profits for ownership.

MANAGEMENT is a product of the mind. It comes from skill born of experience. It is correct "judgment" or "common sense."

MANAGEMENT is the ability to get things done in the order of their importance, and to get them done when they must be done, and done properly, and produce profits at the same time.

MANAGEMENT cannot be passed on to and implanted in every mind by instructions, orders, by house manuals, by letters, by schools—no matter how well all these things may be done.

The oil industry has excellent MANAGEMENT at the top of its big oil companies. But that MANAGEMENT is handicapped by size, as it is in all other large businesses. How far MANAGEMENT flows down the organization chart depends upon each individual who has to impart MANAGEMENT to the next person, the farther it flows, the more slowly and precariously.

Down the organization chart in the flow and distribution of petroleum products, we find a place where new and special problems of MANAGEMENT are constantly arising. That is at the point where the stream of products is broken up into small quantities for the ultimate consumer. For the major oil companies it is at that point that Big Business comes in personal contact with its millions of individual customers, all of them human beings and varying in their individual wants and desires, in their likes and dislikes.

At that point the Independent Oil Jobber applies his personal skill of MANAGEMENT to his individual customers, to residents of his home town, to members of his home chamber of commerce, club, lodge and church. There the Independent Oil Jobber is helping along the flow of petroleum products to the ultimate consumer and seeing that those products do the job for which they have been produced and refined by a vast industry.

And it is here the Independent Oil Jobber collects in the money for these products and for the service they render, to pass the money back to the oil industry that more and better products may continue to be made.

MANAGEMENT in Jobbers, as in other executives, is the exercise of final judgment as to when expenses are too heavy; as to what activity is paying a profit and what is not, and what should be done about it; as to whether this or that man is doing his job and what can be done about it—whether to fire him and replace him, or bolster him up and get him to produce. Good MANAGEMENT tells when not to cut a price. It tells where not to build service stations. It tells how to route trucks so they won't have any dead time. It tells when to junk obsolete equipment.

The Jobber, as a local manager on the sales firing line dealing with personalities, is in no danger of being replaced by a machine, no matter how much the oil industry is stream-lined. Pipelines transport crude, carrying out MANAGEMENT's plans through the operation of pumps. Refineries obey MANAGEMENT's instructions for operating equipment that each year grows larger and larger in capacity per man needed to work it. But the sale of petroleum products is a transaction between individualized human beings—both on the buying AND selling side. Supervision of sales efforts is not a matter which can be mechanized nor can it be done successfully from a far-distant headquarters.

(Next issue of NATIONAL PETROLEUM NEWS, Sept. 25, will contain another chapter condensed from Mr. Platt's book, "The Future for the Independent Oil Jobber". Next week's condensation will include a discussion of the special skill required of local management in oil marketing and how only the Jobber can successfully perform that function.)

# THREE YEARS IN A "TEST TUBE"

## *The Story of Cisco Solvent*

SOME time back, Cities Service research engineers turned their attention to a problem long "in the craw" of the motoring public—the problem of sludge in an auto engine. Formed by long, hard driving, this gummy deposit weakens pickup—wastes gasolene and diminishes power. Unless sludge can be cleaned out, those disturbing symptoms remain.

Tests were made of flushing oils then on the market. They proved that because these oils were mainly petroleum oils, it was chemically impossible for them to dissolve sludge completely. So our research staff set out to find a solution that would really do the job right.

Formula after formula was developed—carefully tested and retested. And finally, after three years of laboratory work, the answer was found in the product known today as Cisco Solvent. More than a mere flushing agent, Cisco Solvent is an effective internal bath for an engine. It not only dissolves sludge, but, because it contains a special lubricating ingredient, it protects as it cleans. The result of a Cisco Solvent treatment is an amazing difference in engine power and efficiency that a motorist can actually feel.

The fact that the same painstaking research responsible for Cisco Solvent is behind every other Cities Service product as well, always has been a matter of pride to our 16,000 Cities Service dealers throughout the country. More than that, as a guarantee of quality, such research is a constant incentive for them to prove in their own way, to the public, that Cities Service dealers really merit "Service" as a "middle name."

**CITIES SERVICE OIL COMPANIES**

**NEW YORK • CHICAGO • SHREVEPORT**

# MERCHANDISING

**This is a readers' forum on merchandising of petroleum products, automotive accessories and allied lines. Let us have your ideas on how to improve selling at stations. Address: Merchandising Editor, NATIONAL PETROLEUM NEWS.**

● As oil marketers go, Bill Halder of Erie, Pa. might not be termed as a big operator. But he does manage to average better than ¾ of a million gallons of gasoline, close to $25,000 worth of tires and around 12 car loads of motor oil in a year. He has a small bulk plant with a total capacity of 100,000 gallons, and he makes deliveries to a half dozen or so customers with an 800 gallon, 4 compartment, 1941 model truck.

Bill is not worried very much about gasoline shortages, curfews or anything else. He hasn't time to be. He is looking forward to the time when the defense program ends and the war is over. For the war interrupted his expansion program. What the future holds, he can only surmise. In the meantime he is taking care of his present business and laying his plans for the time when he can enlarge his plant, put on additional trucks and follow his almost life long ambition to be a really big-time petroleum distributor. This ambition started when Bill was 10 years old back in 1921 when he puttered around his father's small station in Erie. He later got a position with one of the major companies, and worked up to station supervisor. But he didn't care very much about the job. For, as he expresses it, "the brass hats are nice fellows, but they always had a way of showing up at the wrong time and giving you that feeling in the pit of your stomach that's part of the price of working for the other fellow."

So in 1932, after the death of his father, Bill and his brother got enough money together to buy a lot and build a station at Peach and Cherry Streets in Erie. 1932 was not an especially good time to get in any business. But these brothers "shot the works" and built a station that compared with any in that part of the state. It has 2 lifts, a car washing department, with practically every piece of modern equipment that can be named: overhead lubrication system, a tire vulcanizing department, storage and display rooms for tires and private offices up stairs. The average inventory of tires is $8000. Later another station was built in Erie, the brother taking it over and Bill buying his share of the original station.

From the start the station's business has compared favorably with any in Erie. Every department of the business has shown steady gains from the start. It was Bill's theory that an oil marketer in order to be successful must first make a success peronally of his own retail operations; that it is the marketer's business to really know from experience what plans will work, and which ideas might turn out to be all wet. Over the past few years he has tried out many sales plans as well as various products. In selling, nothing is ever presented to a dealer prospect that can't be backed up by pointing to its success in this marketer's own retail operation.

It is this jobber's idea that from now on oil jobbers will be engaged in a fight for survival. He believes that those jobbers, as well as station operators, who follow a planned program of advertising, inspection procedure and merchandising of related gasoline items—tires, batteries, accessories and necessities, will go a long way toward offsetting rationing, increased taxes and rents and personnel going to the army and defense jobs. He is looking to his supplier for guidance along these lines and as a supplier to his dealers, he thinks it is a matter of good business to provide merchandising programs for his dealers.

* * *

### Tire Renewal

As predicted by NPN, the large rubber companies because of the threat of rubber shortage are advertising retreading to consumers. Recently, one rubber company announced in magazine spread that its dealers would institute a "Tire Conservation Plan" built around period checkups, repairs and *retreading*. Most of the large tire companies are promoting retreading with dealer displays and direct mail.

* * *

### New Parking Lot Plan

One of the problems of operating large parking lots has always been the inability of the manager to be in complete touch with all operations. With defense activities causing the lots to be busier, as well as difficulties in getting good personnel, the situation is harder to handle than in the past.

One parking lot operator, Joseph Manning in Long Beach, Calif., seems to have found the answer. For around $400, Mr. Manning has installed loud speaker equipment in order to direct operations from one central point. From one central microphone Manning is able to direct every employe.

The messages to employes are carried through 3 loud speakers, so arranged that they reach all portions of the station operated in connection with the lot, as well as all of the lot itself.

* * *

### Itching Post

Down in the "deep south" they use the expression "you scratch my back and I'll scratch yours" when working out reciprocal deals. Evidently station operator L. R. Still of Atlanta had something like that in mind when he built this back scratching post at his Pure Oil Station at Page and McLendon streets.

# He *has* to take chances

Even with consummate skill and perfect timing there's plenty of risk in the breath-taking triple somersault. There's always a chance that *something may go wrong*.

There are risks, too—a chance that "something may go wrong"—when products are shipped in drums. But not when drums are equipped with Tri-Sure Closures. Every hazard—every chance of tampering, leakage, waste—is banished by Tri-Sure's triple protection: a *seal* that cannot be removed unless it is deliberately destroyed; a *plug* that is always held tightly in place; a *flange* that assures complete drainage.

Make every shipment a *sure* thing—in safety for your product, in protection of your prestige, in keeping the good will of your customers. Equip every drum with Tri-Sure and know that *all* of your product is safe *all* of the time. Write today for booklet containing complete information on Tri-Sure Closures.

AMERICAN FLANGE & MANUFACTURING CO. INC.
30 Rockefeller Plaza, New York

**Tri-Sure**

*Reg. U. S. Pat. Off.*

**CLOSURES**

# What Newspaper Editors Say About the East's 'Shortage'

CLEVELAND, Sept. 15.—Newspaper editorials throughout the country last week were discussing the findings of the Senate committee investigating East Coast oil "shortage".

Following are some representative comments:

## Civilian Morale And The Gas 'Shortage'

One definition of good civilian morale might be: **The public puts its shoulder to the wheel because it is confident the Government knows what it is doing.**

In that light, consider the latest development in East Coast oil shortage.

The Supply Priorities and Allocation Board has made it clear that it will not permit the use of steel plate to construct a new pipeline to the East, although President Roosevelt has approved such a pipeline and Secretary of the Interior Ickes believes that completion of the line in 1942 is the only way to avoid a really serious oil shortage.

No one will believe that the Priorities Board would take such a position thoughtlessly.

If Ickes is right about a shortage, then the board would certainly place steel for the pipeline at the top of the list. Eastern industry is the heart of defense. An oil shortage would obviously cripple the whole defense program.

**Thus, when the Priorities Board refuses to co-operate in the building of a pipeline, it says in effect that it doesn't believe in Ickes' shortage.**

On the same day, Ralph K. Davies, assistant to Ickes as Petroleum Co-ordinator, was telling a Senate committee that the Administration favored pipelines—

"Because we need them desperately for national defense."

**Either Ickes and Davies are wrong or—the Priorities Board is wrong.**

This is no mere difference of opinion. It is a difference arising out of ascertainable FACTS.

Senator Maloney, who heads the Senate committee investigating the situation, believes the railroad men who say they can make up the Eastern deficiency by using 20,000 idle tank cars. Davies denies that 20,000 tank cars are idle. He says the number is "negligible."

Thus we have the demoralizing spectacle of top defense figures who cannot—after a whole Summer of controversy—settle a simple question of fact.

John Q. Citizen doesn't distinguish sharply between SPAB and OPACS and OPM. To him it's all "Washington." When he sees bureau fighting bureau, he frowns. When he sees officials contradicting each other on important FACTS, he begins to worry—and worry hard.

**And John Q. Citizen is right.**

**On matters of paramount importance, Administration policy must be co-ordinated. The Administration must be "Washington," not a struggling mass of bureaucrats unable to verify whether or not there are 20,000 empty tank cars.**

The gasoline "famine" in the East has been mishandled from the first. These blunders, especially the ultimate contradiction involved in the action of the Priorities Board, will undermine public confidence more than a thousand fifth columnists.

This matter is so serious we suggest that President Roosevelt himself:

**1. Tell the public whether there is a gasoline shortage in the East;**
**2. If so, why, and,**
**3. What to do about it.**

If the answer is pipelines, then let's have pipelines. If the answer is rationing, then let's have rationing.

The public will make any necessary sacrifice for defense and for aid to Britain.

The public will stand for almost anything,—

Except confusion and blundering in defense.

*—From Courier Post, Camden, N. J., Sept. 11, 1941*

* * *

## The Ickes Hoax Blows Up

Harold L. Ickes' campaign to reduce gasoline consumption in the East has had the earmarks of chicanery about it from the beginning. Now the campaign is collapsing, and with it apparently goes the interior secretary's sleight-of-hand trick for building a 1,500-mile pipeline which is not needed.

How Mayor LaGuardia of New York gets into the picture is a little mysterious, but he has publicly forecast that the futile attempt to establish a curfew on motoring is near an end.

The day after his forecast, New York Daily News columnists in Washington told the story of how an Ickes emissary cornered the nation's big oil producers in New York, invited them to build an $80,000,000 pipeline from Texas to New Jersey—and told them that if they didn't the government would do so.

And the day after that, the new Supply Priorities and Allocations Board announced that Ickes' pipeline, requiring 700,000 tons of steel needed in defense, was out of the question at this time . . . .

. . . . To begin with, the situation is no better. The curfews did not work. The situation simply never was bad. As to taking credit for the tank car solution "two weeks ago," a spokesman for the railroads has been trying to sell the idea for months.

This performance by the new SPAB is a hopeful sign. To the extent that it continues to repress such economic meddlers as Ickes and Leon Henderson, we have a chance to emerge from the crisis pretty much the kind of country that entered it.

*—From the Cleveland News, Sept. 10, 1941*

* * *

## Our Oil "Co-ordination"

With the prospect of an immediate easing of the gasoline and fuel oil situation on the Atlantic seaboard by use of idle railroad tank cars the country observes that Secretary Ickes, the government's oil co-ordinator, and his deputy, Ralph K. Davies, continue to insist on the urgent need for building a new pipe line from the oil fields of the Southwest. This would serve eastern consumers formerly supplied by tankers that have been transferred from the coastal trade to trans-Atlantic duty.

Here are the gentlemen who for weeks warned the country of the seriousness of the oil shortage that faced the East coast, admittedly not because of any lack of production but as a result of a special shipping problem. They said nothing, however, about the possibility of solving that problem through the use of some 20,000 additional tank cars.

J. J. Pelley, president of the Association of American Railroads, testified recently before a senate investigating committee in Washington that as long ago as last May he had notified the American Petroleum Institute of the existence of a large tank car surplus, available to replace ships that were needed to supply Great Britain. In June, according to Mr. Pelley, he also told the acting oil co-ordinator.

The testimony of the railroad association president indicates that neither the Petroleum Institute nor the office of the oil co-ordinator was interested enough even to ask for further information concerning the exact number of cars on hand or their disposition. Why was that? . . .

. . . The general public has no means of judging. But it observes two facts. One is that the pipe line project is being opposed by both Admiral Emory S. Land, chairman of the maritime commission, and Ralph Budd, defense transportation commissioner. The other is that the East's oil problem appears about to be solved—by private initiative, working without assistance from the oil co-ordinator's office.

The nation may soon begin to wonder just how much confidence it can have in the present management of this particular governmental agency. Whatever else we've had in oil, it hasn't been co-ordination.

*—From Kansas City Star, Sept. 9, 1941*

* * *

## Oil Pipeline Build-Up, and Then the Slaughter

After eight weeks of intensive build-up for an oil pipeline from the oil fields to the east coast comes the paralyzing declaration of the new priorities and allocation board that the line cannot be built for the reason the steel must be routed to some other branch of defense. This we consider about the worst blow that could be inflicted on public morale, and it is at the same time the most amazing confession of governmental impotence we have encountered. Undoubtedly the oil shortage situation is moving right into a terrific let-down . . . .

. . . Much of the blame for the absurd and dangerous mix-up will revert to the president. He has not delegated the proper authority. He said, in response to a direct challenge that the governmental agencies have the power. Well, if they have they are making idiotic use of it. Some agency

# *Concerning*

## THE AVAILABILITY AND QUALITY OF DODGE *Job-Rated* TRUCKS

THE FIRST obligation of Dodge today is to contribute to national defense. Our contribution, at present, is two-fold: In our extensive plants, Dodge is producing important national defense units, including thousands of Army trucks. Also, Dodge is building trucks for the transportation of vital commodities—the movement of which is the essence of *complete* national defense!

On the broad shoulders of America's great trucking industry lies the responsibility of moving largely increased quantities of materials . . . *efficiently, dependably, safely* and at *lowest cost.* The trucking industry's willingness and ability to do this job is beyond question. It becomes a matter of the availability and the quality of trucks. The need is for trucks that are ***built*** for the job . . . to *stay* on the job . . . *Job-Rated* trucks!

Today, we are building more trucks than ever before in our history: trucks for the Army; trucks for industrial defense hauling! They're *good* trucks . . . the *best* we've ever built! Best design, best materials, best workmanship, best quality throughout.

*Now, we also announce more powerful trucks . . . much more powerful than ever before. We're building these higher-powered trucks today . . . shipping them to our dealers. And, we'll continue to do our utmost to get trucks to you . . . quickly . . . as you need them.*

Defense *needs* the trucking industry. The trucking industry *needs* trucks. Dodge is providing the best trucks that men, materials and machines can create, *Job-Rated* trucks of the same high standard of excellence that has won for Dodge its traditional reputation for Dependability.

W. J. O'Neil

*President, Dodge Division,*
*Chrysler Corporation*

*There can be no curtailment of Dodge Quality*
*. . . no substitute for DODGE DEPENDABILITY*

★

of government should have been able to solve this puzzle well before now. Time is precious. Transportation is the only practical difficulty to be solved; the other difficulties have been contributed by bumbling bureaus and boards.

There has been a mighty build-up. There is going to be a mighty let-down. All this big and noisy complication over a plain matter of business is a reflection upon democracy. It ought to give the enemies of democracy great cheer. This fooling in the face of a world conflagration is intolerable.

—*From Tulsa Daily World, Sept.* 11, 1941

* * *

## What Was Ickes' Motive

As the situation looks now, any gasoline shortage on the Eastern seaboard cannot be relieved by building the proposed pipe line, as was Secretary Ickes' plan, but can be overcome with little difficulty by the use of railroad tank cars. Under the most favorable circumstances, the claim that the pipe line from the Texas oil fields to the New York refining area could have been built and put to use by next spring was a wild exaggeration . . . .

As far as any present emergency is concerned, we must look to the railroads for relief, unless more tank ships can be made available . . . .

. . . Most of the tank cars available are owned by the oil companies, and as they have been under fire by the Department of Justice anti-monopoly prosecutor they have been hesitant about entering into the inter-company arrangements needed to solve the gasoline problem in this manner. But it now seems that such arrangements can and will be made, and the Interstate Commerce Commission has approved a 25 per cent cut in freight rates on oil hauled on tank cars.

There is no visible excuse for the continued efforts of Acting Oil Co-ordinator Davies to befog the situation, a policy explainable only on the ground of some hidden motive of Secretary Ickes. Davies first professed not to know of any idle tank cars; then he estimated the number at 10,000 in place of the 20,000 stated by President Pelley of the railway association, and finally he confessed that the 10,000-car estimate was based on partial operation of cars now in use and made no account of cars not actually in service.

Under the searching inquiries of the Senate committee Davies reduced substantially his estimate of a current shortage of oil reserves in this area. Finally, Chairman Maloney is led to believe that the effect of transferring tank ships has been exaggerated, and that many of the tankers diverted to the aid of Britain had not previously been used to serve the East.

The public is entitled to know why Secretary Ickes and his subordinate, Mr. Davies, have so distorted the facts as to frighten the East with a grave oil and gasoline shortage that turns out to have been essentially fictitious. There must have been some motive for it, and the public would like to know what it was.

—*From The Springfield Union, Sept.* 11, 1941
*Springfield, Mass.*

* * *

## A Reproof for Ickes

The report of the Senate special committee which has investigated the supposed oil shortage in the Atlantic Coast States is something like the famous chapter on the snakes of Iceland. There is no shortage, the committee unanimously reports of gasoline or other products of petroleum. There is no shortage of transportation facilities to keep the East supplied with oil. The only shortage which the committee finds is a shortage of surplus. The committee accordingly recommends that all existing restrictions on the sale of gasoline and other oil products be removed at once.

The committee report constitutes a public reproof of the most emphatic sort for Harold L. Ickes, Defense Petroleum Co-ordinator, who has been intermittently occupied since the end of May in attempts to alarm and frighten the public into conservation as he sees it. The committee found early in the hearings that the issue boiled down to one of transportation, and on this question it has accepted the testimony of J. J. Pelley, president of the American Association of Railroads, and of Ralph Budd, Transportation Commissioner, to the effect that idle tank cars could be made available to bring even a theoretical oil shortage to an end. The statement of Mr. Pelley that 20,000 idle tank cars were available has been attacked as based on a 1940 study. The truth is that Mr. Pelley was understating the case, for when Mr. Budd appeared before the committee he testified that as recently as August 7 of this year 411 railroads reported to him that 29,325 empty tank cars were idle and uncalled for for a period of twenty-four hours or longer. Mr. Budd told the committee that he was convinced it would be physically practicable for the railroads to deliver 200,000 barrels of oil a day to the East Coast.

The committee finds that "with proper conservation motorists should find it possible to acquire the gasoline and oil products which they need." The committee does not define proper conservation. Is that task to be left to Mr. Ickes, with his long and sorry record in the handling of an issue of moment to millions of Americans? True conservation, when and where and in what measure it must be applied, will need a different sort of leadership and guidance from the brand which Mr. Ickes has supplied for three months past.

—*From New York Sun, Sept.* 12, 1941

* * *

## The Truth About an Oil Shortage

. . . So the Senate committee concludes that there is not only no actual shortage of petroleum products in this area, but no shortage of transportation facilities that cannot easily be remedied.

It counsels against wasting supplies and recommends expansion of the measures of transportation and distribution now being put into effect. But the committee's report, based on a searching inquiry, boils down to this: There was no justification for scaring Easterners out of a year's growth with the bogey of a desperate emergency.

The East should have a more comfortable surplus of oil and gasoline and is going to get it, with no thanks to officialdom in Washington, but to the Senate committee and private initiative and enterprise.

—*From Philadelphia Enquirer, Sept.* 12, 1941

* * *

## A Tempest in an Oil Can

The Senate special investigating committee which has been examining the reported shortage of gasoline and oil in the Eastern states has published its findings, contrary Mr. Ickes notwithstanding. These are that there is no shortage of gasoline, and neither need nor will be, provided that people avoid needless waste and provided that all available means of transportation, including tank cars, be used. In other words, Mr. Ickes has been beating his breast in a fury and calling upon the people of the West to sacrifice for the people of the East and upon gas-station operators to sell less gas and jackrabbit starters to adopt the tactics of the ox and on all and sundry to stop everything—and all because of an imaginary shortage which has had the bad grace to fail to materialize and does not even seem to be around the corner. We refrain from speculating as to Mr. Ickes's reaction to the Senate committee's report. By now he must realize that he stirred up a tempest in an oil can.

In fairness to these alarms and despite the exaggerations it must be recognized that the shortage which has not materialized might come about if unforeseen contingencies were to cause a further serious dislocation of the transportation system by water and rail. It is the part of prudence, therefore, for motorists to avoid waste.

As for Mr. Ickes's handling of the case—the less said the more charitable. He appears to have been taken for a ride in a gasoline buggy of his own making. Having passed successively through gloomy forebodings, dark prophecies, extreme exasperation, threats and warnings, table poundings, self-justifications and a sudden flight to the tall timbers (leaving a somewhat befuddled assistant to take the rap) little is left for him to do but softly and silently vanish away, as the Boojum did in the "Hunting of the Snark."

—*New York Herald Tribune*

* * *

## All Good Things Must End

The elements and developments seem to have conspired to spoil Secretary Ickes' vacation. The rains in Olympic National Park beat down ceaselessly on his log cabin, appropriately situated on Storm King Mountain. But his spirits were perhaps drenched even more by the news from Washington of the senatorial committee which investigated his oil shortage and found that there was neither shortage of oil nor shortage of transportation.

Though he didn't have much fun on his vacation, perhaps the Ick can draw solace from the knowledge that thousands of people he left behind thoroughly enjoyed every day of his absence, every hour of his golden silence.

—*From Cleveland Press, Sept.* 12, 1941

* * *

Investigations are bringing some interesting facts to light in the gasoline muddle—most of them indicating that there was no reason for all this hullabaloo.

It develops that Secretary Ickes has said he did not expect voluntary gasoline rationing to be a success. His apparent purpose was to create so much confusion that the public would demand ration cards. It looks as if Mr. Ickes will have to find some other way than falsely stirring up the people if he is to have the pleasure of issuing ration cards when they are not needed.

—*Congressman Frances P. Bolton in the Berea (Ohio) News*

* * *

Secretary Ickes' failure to capture the petroleum business and make it a vassal of his Department of the Interior is the second recent indication that Washington is waking up to the fact that his hands are over eager. It was only a few weeks ago that the Federal Power Commission turned him back when he tried to seize control of the country's hydroelectric facilities and possibilities. By reporting that his personally conducted oil shortage is imaginary, the Senate investigating committee adds its reminder that his reach exceeds his grasp. The good result of that may be only temporary, because his memory of such discouragements is poor.

Things have been changing so rapidly in the oil scramble that he created that it was difficult, from day to day, to guess who would come out on top. Now it appears that Ickes missed the prize he sought, that the oil industry retained its entity and has hopes of new low cost transportation in the fairly near future, and that the railroads, at first innocent bystanders, broke precedent by coming out with a prize of immediate value . . . .

—*Richard T. F. Harding in the Cleveland Plain Dealer*

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## To Hold Transportation Show On December 6-12

CLEVELAND—The 8th annual National Highway Transportation Show will be held at Philadelphia's Convention Hall, December 6-12, according to the National Motor Truck Show, Inc.

The 1941 show will depict highway transportation and automotive industry favorably to the public and will enlighten them on the part these industries are playing in the national defense program.

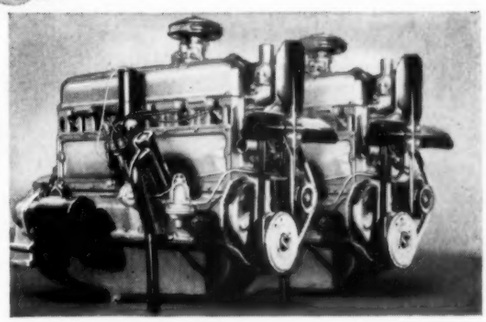
Displays will consist of trucks, trailers, tanks, tractors, passenger cars, road building equipment, mobile kitchens, sterilizers units, diesel and gas engines, third axles, ambulances, buses, accessories and equipment.

# Give a man a Truck that can Pull!

## GMC TRUCKS OUTPULL ALL OTHERS
### *and they're priced with the very lowest*

Give your drivers GMCs, and watch them set new records. Give them GMC pulling power, *unmatched in every engine size,* to boost their pace on all your routes. Give them GMC's greater flexibility, for easier handling in traffic. Give them GMCs—the trucks that outpull all others—and you'll enjoy the highest hauling standards and greatest economy any truck can offer.

*Our own YMAC Time Payment Plan assures you of lowest available rates*



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- *93 Horsepower "228"—183.5 ft.-lbs. Max. Torque*
- *97 Horsepower "236"—192.5 ft.-lbs. Max. Torque*

THE TRUCK OF VALUE

# GMC TRUCKS
GASOLINE — DIESEL

## National Safety Council Picks Defense As Theme of October 6-10 Congress

CLEVELAND, Sept. 8.—Theme of the Thirtieth National Safety Congress and Exposition, which meets at Hotel Stevens, Chicago, Monday-Friday, October 6-10, is "Help Defense—Stop Accidents," according to announcement by the National Safety Council, Inc., Ten thousand safety leaders are expected to attend.

Congress opens Oct. 6 with general business meeting and talks by Col. John Stilwell, president, National Safety Council, Inc.; B. C. Heacock, president, Caterpillar Tractor Co., Peoria, Ill., and Sen. Alexander Wiley, Wisc., member Naval Affairs Committee, Washington.

The Petroleum Section of the Congress is held October 7-9 and will concern pipelines, production, manufacturing, marketing and transportation.

Petroleum Section program follows:

### PETROLEUM SECTION

**Tuesday Afternoon**
**October 7, Stevens Hotel**
**Fourth Floor, Room 440-A**

**2:30** **Annual Reports.**
- (a) **Sectional Activities** — General Chairman, C. A. Miller, Asst. to Mgr., Personnel Dept., The Texas Co., Houston.
- (b) **For Pipelines**—J. L. Manes, Safety & Personnel Dir., Sun Oil Co., Dallas.
- (c) **For Production**—H. T. Markee, Supvr. of Safety, Phillips Petroleum Co., Bartlesville.
- (d) **For Manufacturing**—J. Howard Myers, Supvr., Safety & Fire Protection Div., The Atlantic Refining Co., Philadelphia.
- (e) **For Marketing**—F. R. McLean, Mgr., Safety & Insurance Depts., White Star-Ohio Div., Socony-Vacuum Oil Co., Inc., Detroit.

**2:50** **Election of 1941-42 Officers.**
**3:00** **The Executive's Evaluation of Safety** —(Speaker to be announced)
**3:30** **"Controlling Nature's Fury." (Colored Sound Motion Picture.)**—Produced by Halliburton Oil Well Cementing Co.; Presented by C. P. Parsons, Vice-Pres., Halliburton Oil Well Cementing Co., Duncan, Okla.
**4:00** **Discussion.**
**4:15** **Safe Transportation of Gasoline by Tank Trucks**—A. B. Harper, Jr., Traffic Mgr., Refiners Transport & Terminal Corp., Detroit.
**4:45** **Discussion.**

**Wednesday Afternoon**
**October 8, Stevens Hotel**
**Fourth Floor, Room 440-A**

**2:30** **Applying Protective Material on Pipe Lines**—W. I. Kent, Mgr., Accident & Fire Prevention Dept., Magnolia Petroleum Co., Dallas.
**3:00** **Discussion.**
**3:15** **Safe Methods in Cleaning Catalytic Towers**—Paul Phillips, Safety Eng., The Texas Co., Houston.
**3:45** **Discussion.**
**4:00** **"Minutes That Count." (Sound Motion Picture.)**—Produced by Standard Oil Co. of Calif.; Presented by T. S. Maffitt, Jr., Safety Mgr., Houston Oil Co. of Texas, Houston, and Chairman, Visual Education Committee, Petroleum Section, N.S.C.

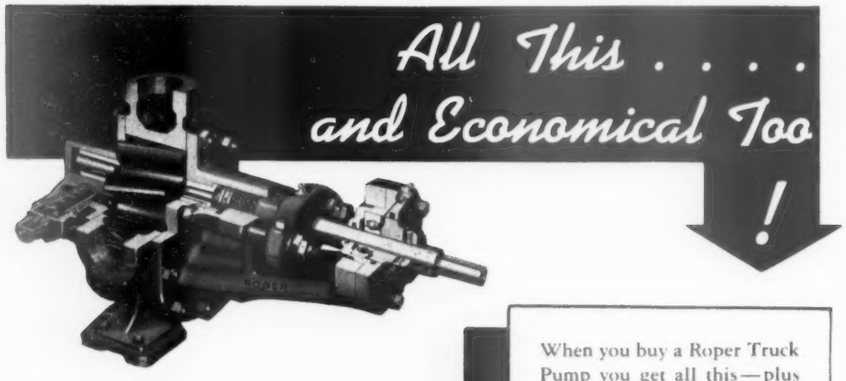
**Thursday Luncheon**
**October 9, Stevens Hotel**
**Second Floor, Grand Ballroom**
**12:30 o'clock**

**Safety and Human Relations**—O. T. Clark, Supt., Ice, Creamery & Bottling Dept., Community Public Service Co., Ft. Worth.

**Thursday Afternoon**
**October 9, Stevens Hotel**
**Fourth Floor, Room 440-A**

**2:30** **The 1940-41 Petroleum Section Safety Contest.**
- (a) **Outstanding Facts**—H. N. Blakeslee, Dir., Dept. of Accident Prevention, American Petroleum Institute, New York City, and Secy., Petroleum Section, N.S.C.
- (b) **Presentation of Awards**—(To be announced)

**3:15** **Petroleum Safety Information, Please** —Presiding: C. L. Hightower, Safety Dir., United Gas Pipe Line Co., Shreveport, La.


Roper Truck Pumps operate quietly . . . Speedy to start . . . Quick to dispense gallonage . . . Efficient time-savers and money-savers . . . Dispense more gallonage per hour, thus enabling you to make more deliveries per day!

When you buy a Roper Truck Pump you get all this—plus simplicity of design, only two moving parts . . . easy to install . . . easy to service . . . self-lubricating . . . compact design . . . larger capacity with lower power consumption . . . fully guaranteed.

*Write for Bulletin* N. 278

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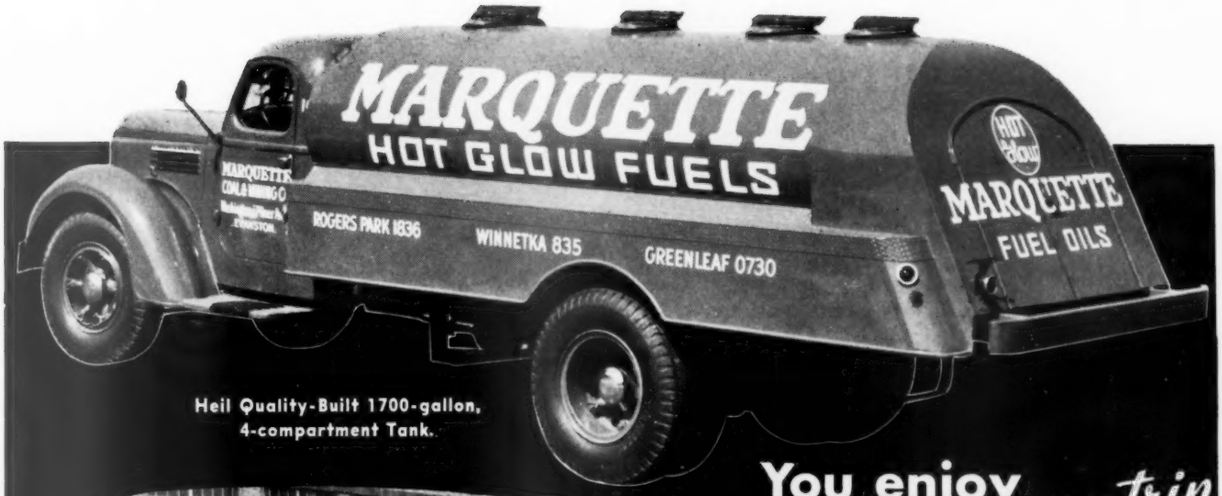
Household sprays, cattle sprays, etc., make an ideal addition to your line in days when sales of other products are curtailed. No pyrethrum supply troubles. MGK, the oldest manufacturer of standardized pyrethrum concentrates, now making long term contracts for Pyrocide 20. Priced right for making high-grade sprays to sell at a profit for you.

McLaughlin Gormley King is the originator of standardized pyrethrum concentrates and willingly gives its advice and assistance to manufacturers of insect sprays. If we can be of assistance, do not hesitate to ask for information on formulas, markets, packaging, or any other information pertinent to these products. We will be glad to help.

**McLaughlin Gormley King Co., Dept. NPN, Minneapolis, Minn.**


### Forms New Company

The David C. Reid Co., a new firm headed by David C. Reid, has taken over the tanker and oil brokerage activities of the Weaver Shipping and Oil Corp., New York.




Heil Quality-Built 1700-gallon, 4-compartment Tank.

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# You enjoy *extra income every trip* —with HEIL light-weight Transportation Tanks

**Carry bigger payloads . . . to help lick the National Defense hauling problem**

Time and again, the famous Heil light-weight design in transportation tanks has proved that *the less you have to spend, the more important it is to buy Heil Quality Tanks.* For example, for one oil hauler Heil saved 300 pounds in weight per tank on a group of 800-gallon tanks, compared with tanks of the same specifications and gauges of materials that he bought from another manufacturer. Heil did it *without* sacrificing structural strength or safety. And that's just one case. There are others where even greater reductions in weight were accomplished. • In these days, weight-saving is of major importance, for it means you can carry *bigger payloads* within local highway restrictions — thus help in licking the National Defense hauling problem. And, of course, extra gallonage means *more deliveries per trip* — more money for you per working day. • Get Heil recommendations on your next tank order. Forty years of experience equip Heil's capable engineers and skilled craftsmen with the ability to arrive at the *profitable* solution to your hauling problem. T-49

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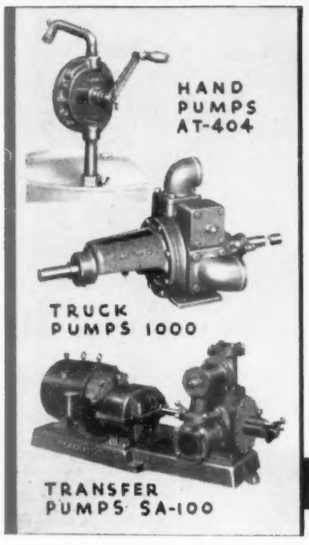
KNOW THAT THIS "Mark" Means

A DEPENDABLE PUMP because

FOR MORE THAN 30 YEARS

BLACKMER PUMPS — BUCKET DESIGN — AUTOMATIC TAKE-UP FOR WEAR

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. . . . . have been "standard equipment" for handling petroleum products.

26 years continuous service is not unusual for Blackmer Rotaries. Let us show you why these pumps deliver MORE GALLONS PER PENNY.

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*Write* **The CINCINNATI ADVERTISING PRODUCTS CO.**

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A comprehensve reference volume touching on the important phases of the Oil Industry's work and economics. Covers History, Sciences, Drilling, Production, Refining, Transportation, Marketing, Finance Investments, Securities, Oil Royalty Business, Regulation of Investments and Securities Markets, Taxing Oil, etc. For anyone interested in an up-to-date and overall picture of the Oil Industry—"Done in Oil" is essential equipment. Over 1000 pages, including colored maps, photographs, illustrations, charts and tables. **$10.00 PER COPY**

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## New Oil Safety Records Reported by A.P.I.

Two new low injury marks were set during 1940, according to the American Petroleum Institute's Annual Summary of Injuries which included 327,112 oil company employees. One was a rate of 11.59 injuries for each one million hours worked and the other was a fatality rate of 30.9 per 100,000 workers.

An injury-severity rate of 1.44 days lost for each 1000 hours worked was slightly higher than 1939's low mark.

The A.P.I. reports that it made awards to 45 individual company departments and subdepartments which worked 1,000,000 hours or longer without a disabling injury. Most outstanding award winner was the Baton Rouge refinery of Louisiana Standard which reported 4,216,600 hours of injury-free work. Mechanical division of same refinery has since reported a record of 5,593,800 hours without a disabling injury, according to the A.P.I.

Fifty oil companies have received A.P.I. certificate awards for outstanding records in accident prevention during 1940. Awards were based on low injury frequency and low injury severity.

Companies receiving safety awards for refining and marketing are:

**REFINING:** Louisiana Standard, Baton Rouge; Humble, Houston; Indian Refining, Lawrenceville, Ill.; Ashland Oil & Refining, Ashland, Ky.; Utah Oil Refining, Salt Lake City; and Col-Tex Refining, Colorado City, Tex.

**MARKETING:** Nebraska Standard, Omaha; Indiana Standard, Chicago; Texas Pacific Coal & Oil, Fort Worth; Humble, Houston; Union Oil, Los Angeles; Pennzoil, Oil City, Pa.; Continental, Ponca City, Okla.; Louisiana Standard, New Orleans; South Penn Oil, Pittsburgh.

## TRADEMARKS

***The following are trademark applications pertinent to our field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Munsey Building, Washington, D. C., trademark specialists.***

UNAFLO—UNIVERSAL ATLAS CEMENT CO. OIL WELL CEMENT on red and brown drawing and representation of the world. (OIL WELL CEMENT disclaimed) Ser. No. 444,244, Universal Atlas Cement Company, New York, N. Y. Filed: June 5, 1941. For oil well cement. Published: August 26, 1941.

UNAFLO—UNIVERSAL ATLAS CEMENT CO. OIL-WELL UNAFLO CEMENT NEW YORK, N. Y. MADE IN THE UNITED STATES OF AMERICA OIL-WELL CEMENT on red and brown drawing. (All wording except UNAFLO and UNIVERSAL ATLAS CEMENT CO. disclaimed) Ser. No. 444,479, Universal Atlas Cement Company, New York, N. Y. Filed: June 12, 1941. For oil well cement. Published: August 26, 1941.

PENETROPE, Ser. No. 435,884, The Texas Company, New York, N. Y. Filed: Sept. 11, 1940. For oils and greases especially adapted for lubricating wire rope. Published: August 26, 1941.

UNOIL, Ser. No. 439,882, Union Label Oil Company, Inc., New York, N. Y. Filed: Jan. 22, 1941. For lubricating oils. Published: August 26, 1941.

BUG-A-CIDE, Ser. No. 445,093, Globe American Corporation, Macomb, Ill. Filed: July 5, 1941. For electrical insect destroyer. Published: August 26, 1941.

# ISOBUTANE
## FOR
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*The Shell Isomerization Process economically converts normal butane to isobutane for aviation gasoline.*

- *Simple plant.*
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*Licensed under patents of Shell Development Company. Inquiries invited.*

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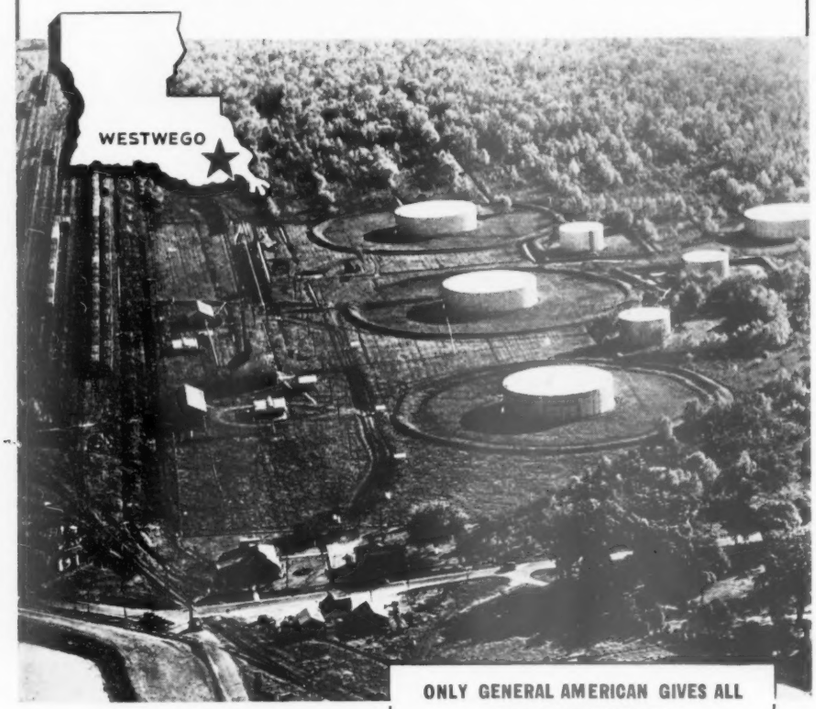
**SHELL DEVELOPMENT COMPANY**

*100 Bush Street, San Francisco, California*

# Go Westwego---- and miss the Mississippi




Producers of bulk liquids west of the Mississippi can ship via New Orleans with no river-crossing charge, thanks to General American's Westwego Terminal. This modern plant brings you seven *exclusive* advantages—gives you complete facilities without investment on your part. Tailored to suit your needs, great or small, General American Service will save you money every day—every way!

**ONLY GENERAL AMERICAN GIVES ALL THESE ADVANTAGES:**

1. NO CONTAMINATION. Separate pumps, lines, storage zones for dissimilar commodities.
2. MODERN PROTECTION. Latest safety appliances; lowest insurance rates, minimum evaporation losses.
3. RELIABLE CUSTODIANSHIP. Our warehouse receipts are highest type of collateral everywhere.
4. INDEPENDENT OWNERSHIP. Strictest privacy; we do not buy, sell or refine any commodities.
5. NO WHARFAGE. There is no wharfage charge at our own private docks.
6. SPEED WITH SAFETY. Day and night crews, complete facilities, eliminate all shipping delays.
7. WORLD'S LARGEST TANK CAR FLEET. One car or hundreds wherever and whenever needed

Strategically located to serve you!

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**GENERAL AMERICAN TANK STORAGE TERMINALS**

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A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION


## Anderson-Prichard Suit Is Upheld by Court

(*Continued from Page* 24)

cracking processes pressure is necessary to insure the necessary time factor. Without pressure the oil would vaporize and leave the drum through the vapor outlet before cracking could be effected. Behimer's is a liquid-phase pressure drum cracking process."

**Gives Characteristics**

In conclusion, the decision stated, the Anderson-Prichard process was clearly distinguishable from that of Behimer for the following reasons:

It cracks in the coil, not in the drum.

It is a vapor liquid phase process, with a short time factor; whereas that of Behimer is a liquid phase, high pressure, long time factor process. (In the Behimer process the cracking time factor is from 3 to 5 hours, in the Anderson-Prichard process from 5 to 6 minutes.)

It releases the pressure at the exit from the furnace and prevents cracking in the drum, or vapor separator; whereas in Behimer's, the same pressure is maintained in the coil and drum and substantially all the cracking takes place after the oil reaches the drum. Behimer's process is designed to handle heavy oil, whereas the alleged infringing process can use only a clean charging stock.

The decision also held that the claims in the suit could not properly be construed as embracing clean circulation with a hot oil pump as an auxiliary to a cracking process (one of Behimer's claims) but, if they were so construed, they would be void for want of invention.

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### Cleveland Negro Marketer Gets Achievement Award

CLEVELAND—Alonzo Wright, Ohio Standard dealer who owns and operates 7 service stations, was awarded the 1940 C.C. Spaulding Business Achievement Award at Memphis, Tenn., during recent convention of the National Negro Business League.

The award, one of the oldest in the country, was originated by Booker T. Washington nearly half a century ago. It was presented Mr. Wright in recognition of his 15-year record as an employer of nearly 100 young colored men, for his encouragement to other members of his race and for his civic achievements. Largest Negro employer of Negroes in the country, Mr. Wright has started more than 600 Negro boys on their business careers, among them Jesse Owens, world-famous track star.

---

American motor vehicle owners pay more in gasoline taxes each year than the combined value of all the butter and eggs produced in this country.

# "I HAD A MILLION REASONS!"

Gilbert & Barker is producing for the Army and Navy precision materiel for National Defense purposes, as well as supplying the Gilbarco products you know. These regular Gilbarco products continue to be available to our customers.

"WHEN I saw business drifting away from me to the newer, more modern-looking stations in my neighborhood, I decided it was about time I put in new pumps.

"I looked at the leading makes, but picked CALCO-METERS because of their fine reputation . . . and I'm certainly glad of my choice! After all, a pump that has proven it can dispense accurately a *million gallons* of gasoline — under rough usage tests — has a million reasons in favor of it.

"I know my new Gilbarco Pumps will serve me loyally for many years, because they have the heritage of a great name behind them."

*Henry Lamontagne*
*Easthampton, Mass.*

**OFFER: Bulletin "96" contains complete specifications and prices of Gilbarco's famous CALCO-METER 96 . . . Write for it today!**

# CALCO-METER 96

## THE MILLION-GALLON PUMP

**GILBERT & BARKER MANUFACTURING COMPANY**
**Springfield, Mass.** **Toronto, Ontario, Canada**

# Equipment Personals

E. L. Biersmith, Jr.

**Edward L. Biersmith, Jr.,** has been promoted to production manager of Columbian Steel Tank Co., Kansas City, Mo. Formerly assistant sales manager of the company, Mr. Biersmith has been in Washington, D. C. for the past year, representing the company's interests in fulfilling many national defense contracts which make Columbian's production an all-time high in this, its 48th year.

Mr. Biersmith, previously with the Ford Motor Co. as night superintendent of its Kansas City branch, has been with Columbian for the past 12 years.

* * *

**George B. Ewing, Jr.,** has joined the staff of sales engineers attached to the Houston office of The Foxboro Co., manufacturers of instruments for process measurement and control. Mr. Ewing, who has had wide industrial experience in the machine and toolmaking industries and in petroleum refining operations, is a graduate of the University of Arkansas and the engineering course at the University of Alabama.

* * *

Defense recently added two new tasks on the shoulders of **Col. W. F. Rockwell,** president of Pittsburgh Equitable Meter Co. One came at meeting of Automotive Parts Manufacturers Assn. in Washington when OPM's James Adams appointed Mr. Rockwell chairman of a committee to select representatives to consult with OPM on transfer of automotive activities to national defense. The other was his appointment as national councillor of the U. S. Chamber of Commerce to represent the Assn. of Gas Appliance Equipment Manufacturers.

* * *

**Charles P. Gulick,** Harrison, N. J., president and chairman of the board, National Oil Products Co., and Mrs. Gulick left east last week for a 2-weeks vacation of golfing and "intelligent loafing" at Lake Placid, N. Y.

* * *

**Capt. A. E. Higgins,** flying vice-president of Pittsburgh Equitable Meter Co., recently had cause to quote Mark Twain's words, "The reports of my death were greatly exaggerated," after a syndicated newspaper report told of an airplane crash in which a pilot of the same name figured and telephone wires to the Pittsburgh firm were jammed with inquiries from friends. Just for the record, Capt. Higgins, a veteran aviator who has piloted his own plane without incident on 3 coast-to-coast trips since the first of this year, is very much alive.

### Shell's New Pipeline Opens September 20

NEW YORK, Sept. 16.—Shell's new 65 mile pipeline which will serve central and western Massachusetts and southern Vermont and New Hampshire will be dedicated at West Boylston, Mass., next Saturday, Sept. 20.

Pipeline is capable of supplying almost 400,000 gals. of finished products daily and links Shell's 45,000,000-gal. Fall River ocean terminal with a new bulk plant at West Boylston.

### Association Ad Pays Tribute To Texas Oil Industry

TULSA, Sept. 15.—Under the heading "Spindletop Started It!" Texas newspapers last week carried a one-page tribute to the Texas oil industry. The tribute, to be inscribed on the granite monument commemorating the 40th anniversary of the Spindletop field, reads:

> "Petroleum has revolutionized industry and transportation; it has created untold wealth, built cities, furnished employment for hundreds of thousands and contributed billions of dollars in taxes to support institutions of government. In a brief span of years, it has altered man's way of life throughout the world."

The Texas Mid-Continent Oil & Gas Assn. meets in Beaumont, Tex., Oct. 9, 10 and 11, to dedicate the granite shaft commemorating Texas' "big oil discovery."

### Second Anti-Knock Forum Meets September 26-27

NPN News Bureau

NEW YORK, Sept. 15.—A two-day forum, second in a series of six, on problems of rating and grading gasolines on anti-knock performance will be held Sept. 26-27 at Phillips Hotel, Kansas City, Mo. Meeting is planned to exchange ideas on operating methods and techniques, types of equipment and new developments in knock rating practices. Forum is sponsored by testing laboratories of Ethyl Gasoline Corp.

### Hold Ohio Safety Meet September 23-25

CLEVELAND, Sept. 15—The 3rd annual Ohio State Safety Conference will be held here at Hotel Cleveland, Sept. 23-25, according to announcement of Judge L. E. Skeel, executive committee chairman. Talks will be made by a number of state and federal officials.

Here's a combination you can't beat—*Quality* at a *Price*—exactly what every motorist wants. Write today for exclusive territory for the sale of Fort Pitt Motor Oil. Fort Pitt is made in one of Pennsylvania's modern refineries by an organization with more than 60 years' refining experience. Also available for exclusive distribution are Four-State, Penn Trump and Beaver-Penn brands.

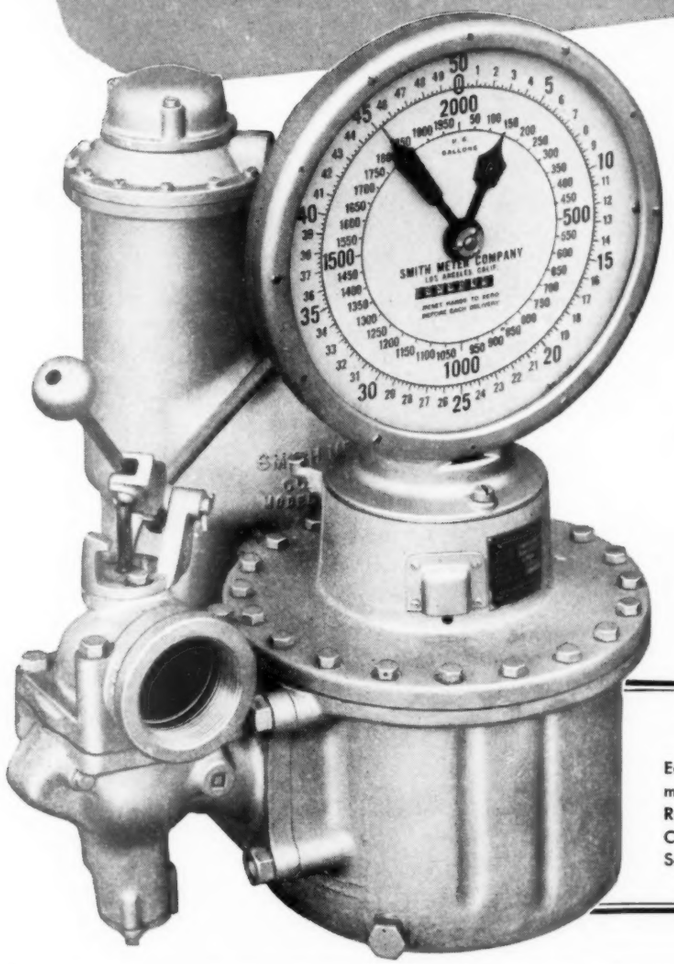
**FREEDOM OIL COMPANY, FREEDOM, PA.**

*Pacific Coast Bulk Plant and Warehouse: Los Angeles, Calif.*

**FREEDOM 100% PURE PENNSYLVANIA MOTOR OILS**

# "It Measures on the Run"

## ...WITH FASTER FLOW AND GREATER ACCURACY!




WHEN you select gravity meters for tank trucks, remember that only Smith Meters provide *positive displacement* by means of the time-tested Smith Rotary Principle . . . a principle so inherently sound that it has set exacting new standards for the entire petroleum metering industry.

That is why this new Smith Truck Meter "measures on the run" . . . assures *faster flow*, size for size, than any other meter. *Greater accuracy* throughout the entire operating range is but one of many outstanding features. And Smith Truck Meters are so flexible that twenty-four different combinations make them adaptable to any possible piping arrangement.

Small wonder, then, that more and more tank truck and bulk plant operators are turning to Smith Meters for the time- and money-saving advantages provided by *faster flow* and *greater accuracy* . . . coupled with ease of installation, versatility of operation, and carefree service.

For detailed information about Smith Meters—available in a *full range* of sizes for bulk plants and pipe lines, as well as truck service—write to the nearest Smith Meter Company Office.

**SMITH TRUCK METER MODEL T-15**

Equipped with 2½" pipe tap outlet. Available counter mechanisms range from simple, direct-reading Horizontal Register to Vertical Dial (illustrated), large Numeral Counter, and Ticket Printer combinations, with or without Set Stop mechanisms.

# SMITH METER COMPANY

**SUBSIDIARY OF A. O. SMITH CORPORATION**

*Factories at Los Angeles and Milwaukee*

SALES OFFICES AT NEW YORK, CHICAGO, HOUSTON, LOS ANGELES • LOCAL STOCKS AT CONVENIENT POINTS • LOCAL AGENTS IN ALL PRINCIPAL CITIES

# QUICK PICK-UP for oil sales

Easy to open . . . easy to pour! These two convenient features of Crown's new type cone-top container are speeding up grocery store sales of motor oil.

This Crown container has been especially designed to give the customer a can of motor oil that is easy to open, easy to pour and easy to carry home from a store. This Crown can needs no special opener and its cone-top acts as a funnel when pouring.

Store sales pick up fast for companies using this newly styled Crown can . . . which can be effectively merchandised in larger sales units through the use of a convenient carton that holds four of the giant cans designed by Crown. This is just another example of Crown's work . . . let us work with you.

CROWN CAN COMPANY, PHILADELPHIA, PA., *Division of Crown Cork and Seal Company,* Baltimore • St. Louis • Houston • Madison • Orlando • Fort Wayne • Nebraska City.

*INDEPENDENT AND HELPFUL* **CROWN CAN**

# MARKETS

## Atlantic Coast

NEW YORK, Sept. 13.—Market conditions along the eastern seaboard were unchanged the past week with all products in good demand and supplies tight. One supplier said that taking care of Navy business and regular customers was all he could do; most said they were limiting sales to regular customers only.

Stocks of kerosine and light fuels were said to be "adequate" but with "no excess". "We're just trying to clear from day to day," one kerosine supplier commented. Storage of heating oils accumulated by jobbers was said to be for mid-winter requirements and continued demand for current needs.

Min. 80 oct. (research) gasoline was priced 0.12c higher at Tampa at 7.37c. Other quotations at that point ranged to 7.7c. Quotations at other seaboard points were unchanged.

## Gulf

NEW YORK, Sept. 13. — Gasoline sales, both cargo and barge lots, and active inquiry for a variety of products were reported at the Gulf the week ended Sept. 13. Some sources said that gasoline was "awfully tight" with lease-lend buying taking so much material off the market that "there isn't enough to take care of domestic demand." At the same time, at least three refiners said they were offering for October-November lifting.

Sale of 80,000 bbls. of 83 oct. (research) at 6.625c was reported for lifting the first half of October, coastwise. Two inquiries of 80,000 bbls. each for min. 80 oct. (research) were reported, with refiners' quotations up 0.25c to 6.5c.

Two 80,000-bbl. cargoes of 400 e. p. unleaded gasoline, one 67 oct., the other 68 oct., were reported sold at 6.25c for coastwise shipment, lifting in October and November, respectively. Inquiry for 100,000 bbls. of 67 oct. was reported for lifting prior to Nov. 1. Quotations for 68 oct. ranged from 6.25 to 6.5c.

Gas oils were priced 0.075 to 0.2c higher following sale of 75,000 bbls. of 48-52 d. i. at 3.7c for September lifting, coastwise. Low quotations for up to 52 d. i. were at 3.7c, for 53-57 d. i. at 4c, and for 58 and above at 4.125c.

Two refiners reported inquiries for four 80,000-bbl. cargoes of No. 2 fuel for lifting September through December, coastwise. Other inquiries reported were for 80-100,000 bbls. for October and "over 100,000 bbls." for prompt lifting, coastwise.

Inquiries totaling 185-190,000 bbls. of kerosine and 90-95,000 bbls. of Bunker "C", prompt lifting, coastwise, also were reported.

## Pennsylvania

CLEVELAND, Sept. 13. — A sharp upswing in crude scale wax prices featured the western Penna. market the second week in September. Kerosine and No. 2 fuel also were priced higher in the upper field. Demand continued heavy for all products.

Sales of small lots of white crude scale were reported at rising prices. Approximately 50 tons sold Sept. 12 at 6c, New York, and quotations that date ranged from 6 to 6.25c, up 0.625 to 0.875c per lb. from quotations at the beginning of the week. Only a small portion of a Navy Dept. inquiry for 2800 tons has been placed as yet, reports indicated, and some sources said the Navy would inquire for even larger quantity in the near future.

Kerosine was up 0.125 to 0.25c in the Bradford-Warren district, with quotations at 6.25c for 45 w.w. and 6.375c for 46 w.w. at the end of the week. No. 2 fuel also was up 0.125c at 6.125 to 6.25c. Some lower field refiners advanced kerosine quotations, but 45 w.w. still was quoted at 6c to 2 refiners Sept. 12.

Inter-refinery sales of bright stock totaling approximately 4000 bbls. were reported by one refiner; prices were not disclosed. Another refiner also reported "sizeable" inter-refinery sales; quantities and prices were not disclosed. Quotations ranged from 25 to 28c for 25 p. t. bright with 2 refiners quoting 25c. One refiner who had been quoting 25c advanced to 27c late in the week.

## Mid-Continent

TULSA, Sept. 13.—Grade 26-70 natural gasoline prices advanced 0.25c at both origin points early the past week. Last reported sales prices were for "a few cars" at 4.5c, FOB Group 3; 4.125c, FOB Breckenridge. Sellers said demand was "very heavy."

Three North Texas refiners advanced quotations for refined gasolines 0.125 to 0.5c; 2 West Texas refiners, 0.125c. New quotations for most part advanced North Texas highs 0.125c; West Texas lows and highs 0.125c. West Texas refiner sold 3 cars 72-74 oct. at 6.25c.

Gasoline demand continued heavy, supplies "extremely tight". Texas refiner received "small lot" inquiries from small East Coast independent distributors for gasoline, fuel oil.

Oklahoma refiner sold 1 car 72-74 oct. gasoline at 6.125c, quoted 6.125c for 3 cars. Same refiner withdrew his 5.25c quotation for 60 oct. & below, ceased manufacture "until further notice." Oklahoma refiners' quotations for 72-74 oct. ranged 6-6.375c, 60 oct. & below, 5.25-5.625c.

Wax call was heavy, supplies "scarce." One refiner quoted 5.75c for 124-126 A.m.p.; another, 5.375c for 131-133 A.m.p. Inquiry for "over 1,000,000 lbs." 131-133 A.m.p. reported.

Oklahoma refiner quoted 90c for No. 6 fuel, up 5c, and sold 3 cars. Another quoted 80c. Railroad takings were heavy.

## Mid-Western

CHICAGO, Sept. 13. — Continued heavy demand for gasoline against contract was reported the past week by Mid-Western refiners and tank car marketers. Supplies were "extremely tight", most suppliers said. Quotations for all products were unchanged.

Open spot sales reported by 4 marketers during the week were: 16 cars 80-82 oct. Ethyl, 8 cars at 6.375c, and 8 cars at 6.5c; 14 cars 72-74 oct., 12 cars at 5.875c, and 2 cars at 6.125c; 6 cars 60 oct. & below at 5.25c; 2 cars 41-43 kerosine at 3.75c; 4 cars 42-44 kerosine at 3.75c; and 4 cars range oil at 4c, FOB Group 3.

Marketers also sold 2 cars No. 2 straw fuel oil at 5c, FOB Chicago district refinery, 2 cars No. 5 fuel oil at 4.5c, delivered Chicago, and 6 cars Bunker "C" fuel oil, 2 cars at 4.15c, 2 cars at 4.22c, and 2 cars at 4.47c, delivered Chicago.

## California

LOS ANGELES, Sept. 13. — Quotations for cargoes of gasoline on West Coast export markets moved within a narrower range the past week, but no changes were made in the low figures for any grade, according to reports from refiners. Not more than 1c separated quotations for 60 octane and 70 octane gasoline. The low figures for U. S. Motor, 60 octane minimum, and a 375 e. p. blend, 70 octane unleaded gasoline were said to be 5.625 and 6.375c, respectively.

Natural gasoline was reported 0.125c higher to a range of 4.875 to 5.375c, f.o.b. absorption plants in the Los Angeles Basin.

Kerosine distillate at independent Basin plants was said to have advanced 5c to a range of $1.10 to $1.15 per bbl. Small quantities of 30-34 gravity gas oil were reported offered at $1.05 per bbl.

# REFINERY and SEABOARD PRICES

## In bulk lots by Motor Transport, Tank Car, Barge or Tanker as shown

**(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)**

### HOW PRICES ARE REPORTED—

Refinery and Seaboard prices in National Petroleum News are gathered by PLATT'S OILGRAM and are as published in the Monday issue of the OILGRAM.

PLATT'S OILGRAM is a reporting service issued in three identical editions daily from News Bureaus at New York, Cleveland, and Tulsa, Okla. PLATT'S OILGRAM gathers and publishes what its publisher and representatives believe to be accurate news of sales, prices and current happenings affecting the oil industry and that will be of interest to its subscribers. As this information is usually private, OILGRAM reports it according to what it is able to obtain from sources deemed reliable.

All information is supplied without guarantee as to its completeness, accuracy time of transmission or promptness of delivery.

The subscriber receives this information for his private use and not for resale or further distribution.

Publisher reserves the right to change the extent, nature and form of showing this information at any time.

Prices shown in the tables are quotations (meaning sellers' general offers or posted prices), or actual sales prices, reported to OILGRAM by refiners for "open spot" transactions, except as otherwise specified.

Prices arrived at by discounts off a specified price or "market date of shipment," prices named in contracts or prices arrived at in accordance with any arrangement made prior to date of sale, are not for "open spot" transactions and therefore are not considered in making the price tables. Prices made to brokers and prices in "Inter-refinery" transactions are also not considered except as may be noted.

All prices are for "immediate" shipment except in Gulf Coast bulk transactions where shipment is generally to be made in ninety days. Prices are FOB refineries, pipelines, or tanker terminals in districts designated.

Prices shown are for quantities in bulk such as tank car lots, motor transport lots or barge lots; and in cents per gallon; heavy fuel oils are in dollars per barrel of 42 U.S. gallons; wax and petrolatums are in cents per pound. Prices applying to barges or cargoes only are so designated.

Prices do not include taxes or inspection fees. Prices are published at the close of the business day.

Mid-Western prices in the tables were gathered from refiners with offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Other refinery prices are given by and for the particular refining district where the material is made and from which it is shipped.

When prices obtained by OILGRAM do not conform to these conditions the exception and the new conditions are noted in the news lead or in conjunction with the price table by footnote or otherwise, for the particular refinery or sales district involved.

Crude oil and products covered by OILGRAM'S news and price service, except where noted, have been represented to the publisher as fully up to the customary trade specifications indicated and according to the generally accepted methods of test: and all crude oil and all products thereof as having been lawfully produced and transported.

Any apparent error should be reported to the nearest OILGRAM or National Petroleum News office at once as no correction will be made after the second issue of the OILGRAM or National Petroleum News following its publication.

***NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads.***

## Summary of Daily Gasoline Prices (Sept. 9 to Sept. 15)

| U. S. Motor, (ASTM octane) | Monday Sept. 15 | Friday Sept. 12 | Thursday Sept. 11 | Wednesday Sept. 10 | Tuesday Sept. 9 |
|---|---|---|---|---|---|
| **80-82 octane Ethyl:** | | | | | |
| Oklahoma | 6.75 – 7.25 | 6.75 – 7.25 | 6.75 – 7.25 | 6.75 – 7.25 | 6.75 – 7.25 |
| Mid-Western (Group 3 basis) | 7.4 (1) | 7.4 (1) | 7.4 (1) | 7.4 (1) | 7.4 (1) |
| N. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 7 –7.125 (2) | 7 –7.125 (2) | 7 (2) | 7 (2) | 7 (2) |
| W. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 7.25 (1) | 7.25 (1) | 7.125 (1) | 7.125 (1) | 7.125 (1) |
| **72-74 octane:** | | | | | |
| Oklahoma | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 |
| Mid-Western (Group 3 basis) | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 | 6 – 6.375 |
| N. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 6 – 6.625 | 6 – 6.625 | 6 – 6.5 | 6 – 6.5 | 6 – 6.5 |
| W. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 6.125-6.25 (2) | 6.125-6.25 (2) | 6 –6.125 (2) | 6 –6.125 (2) | 6 –6.125 (2) |
| **63-66 octane:** | | | | | |
| Oklahoma | 5.625– 6 | 5.625– 6 | 5.625– 6 | 5.625– 6 | 5.625– 6 |
| Mid-Western (Group 3 basis) | 5.6 – 6 | 5.6 – 6 | 5.6 – 6 | 5.6 – 6 | 5.6 – 6 |
| N. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 5.625-6.25 | 5.625– 6.25 | 5.625– 6.125 | 5.625– 6.125 | 5.625–6.125 |
| W. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 5.75–5.875 (2) | 5.75–5.875 (2) | 5.625–5.75 (2) | 5.625–5.75 (2) | 5.625–5.75 (2) |
| **60 octane & below:** | | | | | |
| Oklahoma | 5.25 – 5.625 | 5.25 – 5.625 | 5.25 – 5.625 | 5.25 – 5.625 | 5.25 – 5.625 |
| Mid-Western (Group 3 basis) | 5.2 – 5.625 | 5.2 – 5.625 | 5.2 – 5.625 | 5.2 – 5.625 | 5.2 – 5.625 |
| N. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 5.25 – 5.875 | 5.25 – 5.875 | 5.25 – 5.75 | 5.25 – 5.75 | 5.25 – 5.75 |
| W. Tex. (For shpt. to Tex. & N. M. dest'ns.) | 5.375–5.5 (2) | 5.375–5.5 (2) | 5.25–5.375 (2) | 5.25–5.375 (2) | 5.25–5.375 (2) |
| **Motor Gasoline, 72-74 octane (ASTM)** | | | | | |
| New York harbor | 8 – 8.5 | 8 – 8.5 | 8 – 8.5 | 8 – 8.5 | 8 – 8.5 |
| New York harbor, barges | 7.9 – 8.5 | 7.9 – 8.5 | 7.9 – 8.5 | 7.9 – 8.5 | 7.9 – 8.5 |
| Philadelphia district | 8 – 8.25 | 8 – 8.25 | 8 – 8.25 | 8 – 8.25 | 8 – 8.25 |
| Baltimore district | 7.75–8.25 (2) | 7.75–8.25 (2) | 7.75–8.25 (2) | 7.75–8.25 (2) | 7.75–8.25 (2) |
| **Motor Gasoline:** | | | | | |
| **Western Penna. Bradford-Warren:** | | | | | |
| Min. 80 Oct. ('39 Research) | 8 (2) | 8 (2) | 8 (2) | 8 (2) | 8 (2) |
| 74-76 Oct. (ASTM) | 7.75 (1) | 7.75 (1) | 7.75 (1) | 7.75 (1) | 7.75 (1) |
| 74-76 Oct. (L-3) | 7.5–7.75 (2) | 7.5–7.75 (2) | 7.5 –7.75 (2) | 7.5 –7.75 (2) | 7.5–7.75 (2) |
| **Western Penna. Other Districts:** | | | | | |
| Min. 80 Oct. ('39 Research) | 8 (1) | 8 (1) | 8 (1) | 8 (1) | 8 (1) |
| 74-76 Oct. (ASTM) | 7.25 – 7.75 | 7.25 – 7.75 | 7.25 – 7.75 | 7.25 – 7.75 | 7.25 – 7.75 |
| 74-76 Oct. (L-3) | 7.25–7.5 (2) | 7.25–7.5 (2) | 7.25–7.5 (2) | 7.25–7.5 (2) | 7.25–7.5 (2) |

# REFINERY PRICES

## Gasoline—U. S. Motor (ASTM Octane) except where otherwise specified

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| **OKLAHOMA** | | |
| 80-82 oct. Ethyl | 6.75 – 7.25 | 6.75 – 7.25 |
| 72-74 oct. | 6 – 6.375 | 6 – 6.375 |
| 63-66 oct. | 5.625– 6 | 5.625– 6 |
| 60 oct. & below | 5.25 – 5.625 | 5.25 – 5.625 |
| 60-62 400 e.p. | 5.375 (1) | 5.375 (1) |
| **MID-WESTERN** (Group 3 basis) | | |
| 80-82 oct. Ethyl | 7.4 (1) | 7.4 (1) |
| 72-74 oct. | 6 – 6.375 | 6 – 6.375 |
| 63-66 oct. | 5.6 – 6 | 5.6 – 6 |
| 60 oct. & below | 5.2 – 5.625 | 5.2 – 5.625 |
| **N. TEX.** (For shpt. to Tex. & N. M. dest'ns.) | | |
| 80-82 oct. Ethyl | 7 –7.125 (2) | 7 (2) |
| 72-74 oct. | 6 – 6.625 | 6 – 6.5 |
| 63-66 oct. | 5.625– 6.25 | 5.625– 6.125 |
| 60 oct. & below | 5.25 – 5.875 | 5.25 – 5.75 |
| 60-62, 400 e.p. | 5.5 –6 (1) | 5.375–5.5 (1) |
| **W. TEX.** (For shpt. to Tex. & N. M. dest'ns.) | | |
| 80-82 oct. Ethyl | 7.25 (1) | 7.125 (1) |
| 72-74 oct. | 6.125–6.25 (2) | 6–6.125 (2) |
| 63-66 oct. | 5.75–5.875 (2) | 5.625–5.75 (2) |
| 60 oct. & below | 5.375–5.5 (2) | 5.25–5.375 (2) |
| **CENT. W. TEX.** (Prices to truck transports) | | |
| 80 oct. & above | 7.125 (2) | 7.125 (2) |
| 72-74 oct. | 6.125 (2) | 6.125 (2) |
| 67-69 oct. | 5.625 (2) | 5.625 (2) |
| 62 oct. & below | 5.375 (2) | 5.375 (2) |
| **AMARILLO, TEX.** (For shpt. to W. Okla. & Tex. differential territory.) | | |
| 60 oct. & below | 5.375–5.875 (2) | 5.25–5.5 (2) |
| 60-62, 400 e.p. | 5.5 – 6 (1) | 5.375–5.625 (1) |

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| **KANSAS** (For Kansas destinations only) | | |
| 80-82 oct. Ethyl | 7.5 (1) | 7.5 (1) |
| 72-74 oct. | 6.3 – 6.375 | 6.3 – 6.375 |
| 63-66 oct. | 5.9 – 6 | 5.9 – 6 |
| 60 oct. & below | 5.5 – 5.625 | 5.5 – 5.625 |
| **ARK.** (For shipment to Ark. & La.) | | |
| 72-74 oct. | 6 (1) | 6 (1) |
| 70-72 oct. | 5.875 (1) | 5.875 (1) |
| 60 oct. & below | 5.5 (1) | 5.5 (1) |
| **WESTERN PENNA.** (Motor gasoline.) | | |
| *Bradford-Warren:* | | |
| Min. 80 oct. ('39 research) | 8 (2) | 8 (2) |
| 74-76 oct. (ASTM) | 7.75 (1) | 7.75 (1) |
| 74-76 oct. (L-3) | 7.5–7.75 (2) | 7.5–7.75 (2) |
| *Other districts:* | | |
| Min. 80 oct. ('39 research) | 8 (1) | 8 (1) |
| 74-76 oct. (ASTM) | 7.25 – 7.75 | 7.25 – 7.75 |
| 74-76 oct. (L-3) | 7.25 –7.5 (2) | 7.25–7.5 (2) |
| **CENTRAL MICHIGAN** (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group) | | |
| U.S. Motor: (Oct. L-3): | | |
| 72-74 oct. | 8.5 | 8.5 |
| 67-69 oct. | 7.7 – 7.75 | 7.7 – 7.75 |
| Str. run gasoline, excluding Detroit shpt. | 6 – 6.25 | 6 – 6.25 |
| **OHIO** (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances) | | |
| 72-74 oct. | 8.375 | 8.375 |
| **CALIFORNIA** U.S. Motor: | | |
| 58-61 grav., 375-400 e.p., 65 oct. & above | 7 – 7.5 | 7 – 7.5 |
| 54-58 grav., for outside state shipment | 6 – 6.75 | 6 – 6.75 |
| 54-58 grav., for instate shipment | 5.5 – 6.5 | 5.5 – 6.5 |

## Kerosine, Gas & Fuel Oils

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| **OKLAHOMA** | | |
| 41-43 grav. w.w. | 4.375– 4.75 | 4.375– 4.75 |
| 42-44 grav., w.w. | 4.5 – 4.875 | 4.5 – 4.875 |
| Range Oil | 4 – 4.375 | 4 – 4.375 |
| No. 1 P.W. | 3.875– 4.25 | 3.875– 4.25 |
| No. 1 straw | 3.5–4.25 (2) | 3.5–4.25 (2) |
| No. 2 straw | 3.5 – 4.125 | 3.5 – 4.125 |
| U.G.I. gas oil | No Price | No Price |
| No. 3 fuel | 3.375– 3.625 | 3.375– 3.625 |
| No. 6 fuel | $0.80-$0.90 (2) | $0.80-$0.90 (2) |
| 14-16 fuel | $0.95 (2) | $0.95 (2) |
| **MID-WESTERN** (Group 3 basis) | | |
| 41-43 grav. w.w. | 4.375– 4.75 | 4.375– 4.75 |
| 42-44 grav. w.w. | 4.5 – 4.875 | 4.5 – 4.875 |
| Range Oil | 4 –4.2 (2) | 4 –4.2 (2) |
| No. 1 p.w. | 3.75 – 4.125 | 3.75 – 4.125 |
| No. 2 straw | 3.375– 3.6 | 3.375– 3.6 |
| No. 3 | 3.25 – 3.5 | 3.25 – 3.5 |
| No. 5 | $0.85 (1) | $0.85 (1) |
| No. 6 | $0.85-$0.875 (2) | $0.85-$0.875 (2) |
| **N. TEX.** (For shpt. to Tex. & N. M. dest'ns.) | | |
| 41-43 grav. w.w. | 4 – 4.875 | 4 – 4.875 |
| No. 1 P.W. | 4.2 – 4.5(2) | 4.125–4.375 (1) |
| **AMARILLO, TEX.** (For shpt. to W. Okla. & Tex. differential territory.) | | |
| 41-43 grav. w.w. | 4.75 (2) | 4.75 (2) |
| No. 1 straw | 4.3 (1) | 4.3 (1) |
| **KANSAS** (For Kansas destinations only) | | |
| 41-43 grav. w.w. | 4.6 (1) | 4.6 (1) |
| 42-44 gravity w.w. | 4.7 – 4.875 | 4.7 – 4.875 |
| No. 1 p.w. | 4.1 – 4.3 (2) | 4.1 –4.3 (2) |
| No. 6 fuel | $0.85-$0.925 (2) | $0.85-$0.925 (2) |

# REFINERY PRICES (Continued)

**(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)**

***NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads.***

## Kerosine, Gas & Fuel Oil

**(Continued)**

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| **ARK.** (For shipment to Ark. and La.) | | |
| 41-43 grav. w.w. | 4.625 (1) | 4.625 (1) |
| No. 1 | 4 (1) | 4 (1) |
| No. 2 | 3.375 (1) | 3.375 (1) |
| No. 3 fuel | 3.375 (1) | 3.375 (1) |
| Tractor fuel, for shpt. to Ark. points only | 5.125 (1) | 5.125 (1) |
| **WESTERN PENNA.** | | |
| *Bradford-Warren:* | | |
| 45 grav. w.w. | 6.25 | 6 – 6.25 |
| 46 grav. w.w. | 6.375 (1) | 6.25 (1) |
| No. 1 fuel | 6.25 (1) | 6.25 (1) |
| No. 2 " | 6.125–6.25 (2) | 6–6.25 (2) |
| No. 3 " | 6.25 (1) | 6.25 (1) |
| 36-40 gravity | 6.25 (1) | 6.25 (1) |
| *Other districts:* | | |
| 45 grav. w.w. | 6 – 6.5 | 6 – 6.5 |
| 46 grav. w.w. | 6.125–6.625 | 6.125–6.625 |
| 47 grav. w.w. | 6.25 – 6.625 | 6.25 – 6.625 |
| No. 1 fuel | 5.875– 6.25 | 5.875– 6.25 |
| No. 2 " | 5.875– 6.375 | 5.875– 6.375 |
| No. 3 " | 5.875– 6.25 | 5.875– 6.25 |
| 36-40 grav., Pittsburgh dist. prices excluded | 5.875– 6.25 | 5.875– 6.25 |
| **CENTRAL MICHIGAN** (FOB Central Mich. refinery group basis for shpt. within Mich.; shpts. may originate at plants outside Central group.) | | |
| 47-49 gravity w.w. | 6 – 6.375 | 6 – 6.375 |
| P.W. Distillate | 5.5 – 6 | 5.5 – 6 |
| No. 3 gas oil, Straw | 5 – 5.8 | 5 – 5.8 |
| U.G.I. gas oil | 4.5 – 4.875 | 4.5 – 4.875 |
| *Fuel Oils* (Vis. at 100). | | |
| 300-500 Vis. | 4 –4.25 (2) | 4 –4.25 (2) |
| 100-300 Vis. | 4.5 (1) | 4.5 (1) |
| **OHIO** (S. O. Ohio quotations for statewide delivery) | | |
| Kerosine | 6.5 | 6.5 |
| **CALIFORNIA** | | |
| 40-43 grav. w.w. | 4.5 – 6 | 4.5 – 6 |
| *San Joaquin Valley:* | | |
| Heavy fuel | $0.70 –$0.85 | $0.70 –$0.85 |
| Light fuel | $0.75 –$0.85 | $0.75 –$0.85 |
| Diesel fuel | 2.75 – 4 | 2.75 – 4 |
| Stove dist. | 2.75 – 4 | 2.75 – 4 |
| *Los Angeles:* | | |
| Heavy fuel | $0.65 –$0.75 | $0.60 –$0.75 |
| Light fuel | $0.72 –$0.80 | $0.72 –$0.80 |
| Diesel fuel | 2.75 – 4 | 2.75 – 4 |
| Stove dist. | 2.75 – 4 | 2.75 – 4 |
| *San Francisco:* | | |
| Heavy fuel | $0.85 | $0.80 |
| Light fuel | $0.90 | $0.90 |
| Diesel fuel | 4.5 | 4.5 |
| Stove dist. | 5.5 | 5.5 |

*Note:* All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200; and stove distillate, spec. 100.

## Lubricating Oils

**WESTERN PENNA.**

Prices are for sales made, or offers reliably reported, to jobbers & compounders only.

*Viscous Neutrals—No. 3 col. Vis. at 70°F*

| | | |
|---|---|---|
| 200 Vis. (180 at 100°) 420-425 fl. | | |
| 0 p.t. | 40.5 (1) | 40.5 (1) |
| 10 p.t. | 39.5 (1) | 39.5 (1) |
| 15 p.t. | 38.5 (1) | 38.5(1) |
| 25 p.t. | 33–34 | 33–37 |
| 150 Vis. (143 at 100) 400-405 fl. | | |
| 0 p.t. | 38.5 (1) | 38.5 (1) |
| 10 p.t. | 37.5 (1) | 37.5 (1) |
| 15 p.t. | 36.5 (1) | 36.5 (1) |
| 25 p.t. | 31–32 | 31–35 |
| *Cylinder Stocks* | | |
| Brt. stk., 145-155 vis. at 210°, 540-550 fl., No. 8 col. | | |
| 10 p.t. | 30.5 (1) | 29.5 (1) |
| 15 p.t. | 29.5 (1) | 28.5 (1) |
| 25 p.t. | 25–28 | 25–28 |
| 600 S.R. filterable | 15–16 | 14–16 |
| 650 S.R. | 15–16.5 | 14.5–16.5 |
| 600 fl | 15–17 | 15–17 |
| 630 fl | 16–17.5 | 16–17.5 |

**MID-CONTINENT** (F. o. b. Tulsa)

Neutral Oils (Vis. at 100° F. 0 to 10 P.P.)

| Pale Oils: Vis. Color | | |
|---|---|---|
| 60- 85—No. 2 | 7.5 – 8.5 | 7.5 – 8 |
| 86-110—No. 2 | 8 – 8.5 | 8 – 8.25 |
| 150—No. 3 | 13.5–14.5 | 13.5 |
| 180—No. 3 | 14–15 | 14 |
| 200—No. 3 | 14–15 | 14–14.5 |
| 250—No. 3 | 15.5–16.5 | 15.5 |
| 280—No. 3 | 16–17.5 | 16–16.75 |
| 300—No. 3 | 17–18.5 | 17–17.5 |

## Lubricating Oils (Cont'd)

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| Red Oils: | | |
| 180—No. 5 | 14 (1) | 14 (1) |
| 200—No. 5 | 14 –14.5 (2) | 14 –14.5 (2) |
| 280—No. 5 | 16.5 (1) | 16.5 (1) |
| 300—No. 5 | 16.5–17.5 | 16.5–17.5 |

Note: Viscous Neutrals, 15-25 p.p. generally are quoted 0.5c under 0-10 p.p. oils. Non-viscous oils, 15-25 p.p., generally are quoted 0.25c under 0-10 p.p. oils.

| | | |
|---|---|---|
| Bright Stock—Vis. at 210° | | |
| 200 Vis. D | 27 (1) | 26 (1) |
| 150-160 Vis. D: | | |
| 0 to 10 p.p. | 22–23 | 22–22.5 |
| 10 to 25 p.p. | 21.5–22.5 | 21.5–22 |
| 25 to 40 p.p. | 22 (1) | 22 (1) |
| 150-160 vis. E | 21–21.5 | 21–21.5 |
| 120 Vis. D: | | |
| 0 to 10 p.p. | 21–22.5 | 21–21.5 |
| 600 S.R. Dark Green | 8.5 –9 (2) | 8.5 –9 (2) |
| 600 S.R. Olive Green | 10 –10.5 | 10 –10.5 |
| 631 S.R. | 18.5 (1) | 18.5 (1) |
| Black Oil | 4–5.5 (2) | 4–5.5 (2) |

**SOUTH TEXAS** Neutral Oils

| Vis. Color Pale Oils: (*Vis. at 100°F* | | |
|---|---|---|
| 100 No. 1½-2½ | 6.5 | 6.5 |
| 200 No. 2-3 | 8.75 | 8.75 |
| 300 No. 2-3 | 9.25 | 9.25 |
| 500 No. 2½-3½ | 10 | 10 |
| 750 No. 3-4 | 10.25 | 10.25 |
| 1200 No. 3-4 | 10.375 | 10.375 |
| 2000 No. 4 | 10.5 | 10.5 |
| Red Oils: | | |
| 100 No. 5-6 | 6.5 (2) | 6.5 (2) |
| 200 No. 5-6 | 8.75 | 8.75 |
| 300 No. 5-6 | 9.25 | 9.25 |
| 500 No. 5-6 | 10 | 10 |
| 750 No. 5-6 | 10.25 | 10.25 |
| 1200 No. 5-6 | 10.375 | 10.375 |
| 2000 No. 5-6 | 10.5–11.5 | 10.5–11.5 |

**CHICAGO** (From Mid-Continent p.l. crude.)

Neutral oils (Vis. at 100° F. 0 to 10 p.p.)

| Pale Oils Vis. Color | | |
|---|---|---|
| 60-85—No. 2 | 9 (1) | 9 (1) |
| 86-110—No. 2 | 9.5 (1) | 9.5 (1) |
| 150—No. 3 | 14.5 (1) | 14.5 (1) |
| 180—No. 3 | 15 (1) | 15 (1) |
| 200—No. 3 | 15 (1) | 15 (1) |
| 250—No. 3 | 16 (1) | 16 (1) |
| Red Oils: | | |
| 180—No. 5 | 15 (1) | 15 (1) |
| 200—No. 5 | 15 (1) | 15 (1) |
| 250—No. 5 | 16 (1) | 16 (1) |
| 280—No. 5 | 17.5 (1) | 17.5 (1) |
| 300—No. 5 | 17.5 (1) | 17.5 (1) |

**Note:** Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower.

| | | |
|---|---|---|
| Unfiltered Steam Refined: (Viscosity at 210°) | | |
| 140 | 11 (1) | 11 (1) |
| 160 | 12 (1) | 12 (1) |
| 200 | 13 (1) | 13 (1) |
| Bright stocks, 160 vis. at 210 No. 8 color: | | |
| 0 to 10 p.p. | 23 (1) | 23 (1) |
| 15 to 25 p.p. | 22.5 (1) | 22.5 (1) |
| 30 to 40 p.p. | 20.75 (1) | 20.75 (1) |
| E filtered Cyl. Stock | 15 (1) | 15 (1) |

**Note:** To obtain prices delivered in Chicago, add 0.25c per gal.

## Natural Gasoline

(Group 3 & Breckenridge prices are to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

| | | |
|---|---|---|
| **FOB GROUP 3** | | |
| Grade 26-70 | 4.5 (Sale) | 4.375 (Sales) |
| **FOB BRECKENRIDGE** | | |
| Grade 26-70 | 4.125 (Sales) | 4 (Sales) |
| **CALIFORNIA** (FOB plants in Los Angeles basin) | | |
| 75-85, 350-375 e.p. for blending | 4.875– 5.375 | 4.75 – 5.25 |

## Naphtha and Solvent

| Prices Effective (FOB Group 3) | Sept. 15 | Sept. 8 |
|---|---|---|
| Stoddard solvent | 6.625 | 6.625 |
| Cleaners' naphtha | 7.125 | 7.125 |
| V. M. & P. naphtha | 7.125 | 7.125 |
| Mineral spirits | 6.125 | 6.125 |
| Rubber solvent | 7.125 | 7.125 |
| Lacquer diluent | 7.375– 8.125 | 7.375– 8.125 |
| Benzol Diluent | 7.875– 8.625 | 7.875– 8.625 |
| **WESTERN PENNA** | | |
| Untreated naphtha | 6.75 – 7.25 | 6.75 – 7.25 |
| Stoddard solvent | 7 – 7.5 | 7 – 7.5 |

**OHIO** (S. O. Ohio quotations for statewide delivery):

| | | |
|---|---|---|
| V.M.&P. naphtha, D.C. naphtha, Varnelene & Sohio solvent | 10 | 10 |
| Rubber solvent | 9 | 9 |

## Wax

White Crude Scale:

| **WESTERN PENNA.** (Bbls. C.L., N. Y.) | | |
|---|---|---|
| 122-124 A.m.p. | 6 – 6.25 | 5.5 – 5.75 |
| 124-126 A.m.p. | 6 – 6.25 | 5.5 – 5.75 |
| **OKLAHOMA** (Bbls. or burlap bags, C.L.) | | |
| 124-6 AMP | 6 (1) | 5.5 (1) |
| 131-3 AMP | 5.875 (1) | 5.375 (1) |

**CHICAGO** (FOB Chicago district refinery of one refiner, in bags or slabs loose, carloads. Melting points are EMP (ASTM) methods: add 3° F. to convert into AMP.)

| *Fully refined:* | | |
|---|---|---|
| 122-124 (bags only) | 5.9 | 5.9 |
| 125-127 | 5.9 | 5.9 |
| 127-129 | 6.15 | 6.15 |
| 130-132 | 6.85 | 6.85 |
| 132-134 | 7.1 | 7.1 |
| 135-137 | 7.85 | 7.85 |

## Petrolatums

**WESTERN PENNA.** (Bbls., carloads; tank cars, 0.5c per lb. less.)

| | | |
|---|---|---|
| Snow White | 6.125– 7 | 6.125– 7 |
| Lily White | 5.375– 6 | 5.375– 6 |
| Cream White | 4.375– 5 | 4.375– 5 |
| Light Amber | 3.375– 3.875 | 3.375– 3.875 |
| Amber | 3.125– 3.5 | 3.125– 3.5 |
| Red | 3 – 3.25 | 3 – 3.25 |

## Group 3 Freight Rates

**To Division Headquarters Points of Standard Oil Co. of Indiana**

| | Gasoline Kerosine | | Distillate-Gas Oil-Fuel Oil | |
|---|---|---|---|---|
| | Cents per Cwt. | Cents per gal. 6.6 lbs. | Cents per Cwt. | Cents per gal. 7.4 lbs. |
| Chicago, Ill. | 36 | 2.376 | 32 | 2.368 |
| Decatur, Ill. | 32 | 2.112 | 31 | 2.294 |
| Joliet, Ill. | 36 | 2.376 | 32 | 2.368 |
| Peoria, Ill. | 33 | 2.178 | 31 | 2.294 |
| Quincy, Ill. | 31 | 2.046 | 29 | 2.146 |
| Indianapolis, Ind. | 38 | 2.508 | 39 | 2.886 |
| Evansville, Ind. | 35 | 2.310 | 37 | 2.738 |
| South Bend, Ind. | 44 | 2.904 | **42 | **3.108 |
| Detroit, Mich. | 64 | 4.224 | 51 | 3.774 |
| Grand Rapids, Mich. | 55 | 3.630 | **50 | **3.700 |
| Saginaw, Mich. | 66 | 4.356 | 53 | 3.922 |
| Green Bay, Wis. | 41 | 2.706 | 41 | 3.034 |
| Milwaukee, Wis. | 39 | 2.574 | 34.5 | 2.553 |
| LaCrosse, Wis. | 37 | 2.442 | 37 | 2.738 |
| Minneapolis-St. Paul | 37 | 2.442 | 37 | 2.738 |
| Duluth, Minn. | 41 | 2.706 | 41.5 | 3.071 |
| Mankato, Minn. | 37 | 2.442 | 37 | 2.738 |
| Des Moines, Ia. | 29 | 1.914 | 29 | 2.146 |
| Davenport, Ia. | 33 | 2.178 | 31 | 2.294 |
| Mason City, Ia. | 34 | 2.244 | 33.5 | 2.479 |
| St. Louis, Mo. | 29 | 1.914 | 26.5 | 1.961 |
| Kansas City, Mo. | 22 | 1.452 | 22.5 | 1.665 |
| St. Joseph, Mo. | 25 | 1.650 | 22.5 | 1.665 |
| Fargo, N. D. | 51 | 3.366 | 50.5 | 3.737 |
| Huron, S. D. | 43 | 2.828 | 42.5 | 3.145 |
| Wichita | | | | |
| From Ponca City | 7.5 | *0.495 | 7.5 | †0.555 |
| From Tulsa | 12.5 | *0.825 | 12.5 | †0.925 |
| From Cushing | 11 | *0.726 | 11 | †0.814 |

*This rate also includes distillate rate at 6.6 lbs. per gal.

**This rate applies only to residual fuel and gas oil.

†This rate is exclusive of distillate which is based on 6.6 lbs. per gal. from Ponca City, Tulsa and Cushing, Okla., to Wichita. Includes only gas oil and fuel oil.

NOTE: There is no Group 3 rate to Wichita, Kans.

# SEABOARD PRICES EXPORT AND COASTWISE

**(NOTE—Parenthetical figures after prices indicate number of companies quoting when less than three companies are quoting.)**

***NOTICE—Owing to great demand, refiners generally limit quotations to regular customers and refuse bids, though higher, from others. Refiners' prices and sales shown; bids reported in market leads***

## Atlantic Coast

**(Prices are of refiners, FOB their refineries & their tanker terminals, & of tanker terminal operators, FOB their terminals)—Prices Effective Sept. 15**

**MOTOR GASOLINE**

| District: | Min. 80 Oct. '39 Research (Max. 2 cc. Lead) | 72-74 Oct. (ASTM) | 68-70 Oct. (ASTM) |
|---|---|---|---|
| N. Y. Harb. | 8.5 – 9 | 8 – 8.5 | 8 (1) |
| N. Y. Harb., barges | 8.5 | 7.9 – 8.5 | 7.9 (1) |
| Albany | 8.1 – 8.8 | .... | .... |
| Philadelphia | 8 – 8.7 | 8 – 8.25 | 8 – 8.2 (2) |
| Baltimore | 7.75 – 8.5 | 7.75–8.25 (2) | .... |
| Norfolk | 7.5 – 8.5 | 7.5 –8.25 (2) | 7.25 –7.5 (2) |
| Wilmington, N. C. | 7.5 – 8 | 7.5 (1) | 7.25–7.5 (2) |
| Charleston | 7.6 – 7.8 | 7.5 (1) | 6.9 –7.1 (1) |
| Savannah | 7.37 – 7.7 | .... | 7.1 –7.3 (2) |
| Jacksonville | 7.37 – 7.7 | 7.5 (1) | 7.1 –7.3 (2) |
| Miami | 7.37–7.7 (2) | .... | 7.1 –7.3 (1) |
| Tampa | 7.37 – 7.7 | .... | 7.1 –7.3 (1) |
| Pensacola | 7 –7.2 (1) | .... | 6.6 –6.8 (1) |
| Mobile | 6.87 – 7.2 | .... | 6.6 –6.8 (1) |
| New Orleans | 6.75 – 7.37 | 6.25–6.75 (2) | .... |
| Portland | 8.3 – 9.4 | 8.6 (1) | .... |
| Boston | 8.2 – 9 | 8.5 (2) | 8.5 (1) |
| Providence | 8.2 – 9.1 | 8.5 (1) | .... |

**FUEL OILS**

| | KEROSINE and/or NO. 1 FUEL | No. 2 | No. 3 | No. 5 | No. 6 |
|---|---|---|---|---|---|
| N. Y. Harb. | 5.3 – 5.75 | 5.2 – 5.5 | 5.2 | $1.65-1.75 (2&a) | $1.35 –$1.50 |
| N. Y. Harb., barges | 5.2 – 5.75 | 5.1 – 5.5 | 5.1 | .... | .... |
| Albany | 5.5 | 5.3 | 5.3 | $1.95 (1) | $1.55 (1) |
| Philadelphia | 5.4 – 5.8 | 5.2 – 5.25 | 5.2 – 5.25 | $1.68 | $1.35 |
| Baltimore | 5.4 – 5.45 | 5.2 – 5.25 | 5.2 – 5.25 | $1.68 (1) | $1.35 |
| Norfolk | 5.3 – 5.5 | 5.2 – 5.25 | 5.2 –5.25 (2) | .... | $1.35 (2) |
| Wilmington, N. C. | 5.25 – 5.5 | 5.2 – 5.25 | .... | .... | .... |
| Charleston | 5.4 – 5.5 | 5.2 (2) | .... | .... | $1.30 (2) |
| Savannah | 5.25 – 5.5 | .... | .... | .... | $1.30 (1) |
| Jacksonville | 5 – 5.5 | 5 (1) | 5 (1) | .... | $1.30 (1) |
| Miami | 5.25–5.5 (2) | .... | .... | .... | .... |
| Tampa | 5.25 – 5.5 | 5 (1) | .... | .... | $1.25 (1) |
| Pensacola | 4.8 – 5 (1) | .... | .... | .... | .... |
| Mobile | 4.75 – 5 | .... | .... | .... | .... |
| New Orleans | 4.25 – 4.625 | 3.75 – 4 (2) | .... | $1.68 (1) | $0.85 (2) |
| Portland | 5.5 | 5.3 | 5.3 (2) | $1.95 (1) | $1.35 –$1.55 |
| Boston | 5.4 | 5.2 | 5.2 (2) | $1.65 (2) | $1.35 |
| Providence | 5.4 | 5.2 | 5.2 | $1.60 –$1.65 | $1.35 |

(a) This price is for a straight-run, low pour test No. 5 fuel.

| | Bunker C Fuel Ships' bunkers (Ex Lighterage) | Diesel Oil Ships' bunkers (Ex Lighterage) | Diesel Oil Shore Plants | Gas House Gas Oil 28-34 Gravity |
|---|---|---|---|---|
| N. Y. Harbor | $1.35 –$1.50 | $2.15 | 5.2 –5.3 (2) | 5.3 (2) |
| Albany | $1.55 (1) | $2.35 (1) | 5.3 (2) | 5.5 (1) |
| Philadelphia | $1.35 | $2.15 | .... | .... |
| Baltimore | $1.35 | $2.15 | 5.2 (1) | 5.2 (1) |
| Norfolk | $1.35 | $2.15 | 5.2 (1) | 5.2 (1) |
| Charleston | $1.30 | $2.15 (2) | 5.2 (1) | 5.2 (1) |
| Savannah | $1.30 (1) | $1.99 (1) | .... | .... |
| Jacksonville | $1.30 (2) | $1.99-$1.995 (2) | .... | .... |
| Tampa | $1.25 (2) | $1.99-$1.995 (2) | .... | .... |
| New Orleans | $0.85 | $1.55 (2) | 4 (1) | 4 (1) |
| Portland | $1.35 –$1.55 | $2.23 –$2.25 | 5.3 (1) | 5.4 (1) |
| Boston | $1.35 | $2.15 –$2.18 | 5.2 (2) | 5.3 (2) |
| Providence | $1.35 | $2.15 –$2.18 | 5.2 (1) | 5.3 (1) |

## Wax

**(Melting points are AMP, 3° higher than EMP. Export prices FAS c.l. Domestic prices FOB, in bags, c.l. Scale solid; fully refined slabs.)**

**Prices Effective Sept. 15**

| Crude Scale: | New Orleans Export | N. Y. Domestic | N. Y. Export |
|---|---|---|---|
| 124-6 Yellow | 6 (1) | .... | 6 (1) |
| 122-4 White | .... | 5.75–6.25 | 6 –6.25 |
| 124-6 White | 6–6.25 (2) | 5.75–6.25 | 6 –6.25 |
| Fully Refined: | | | |
| 123-5 | 6.25 (1) | 5.6–6.4 (2&a) | 6.25 (1) |
| 125-7 | 6.25 (1) | 5.6-6.55(2&a) | 6.25 (2) |
| 128-30 | 6.5 (1) | 5.6–6.95 | 6.5 (2) |
| 130-32 | 6.75 (1) | 5.85–7.2 (2) | 6.5-6.75 (2) |
| 133-5 | 7 (1) | 6.15–7.5 | 7 (2) |
| 135-7 | 7.25 (1) | 6.4 (1) | 7-7.25 (2) |

108-11 White Match wax (tight bbls.) ..... 6.25 (1)

(a) 0.4c discount generally given for slabs loose.

## Naphtha

| Prices Effective Sept. 15 | V.M.&P. Naphtha | Mineral Spirits |
|---|---|---|
| Baltimore | 10–10.5 (2) | 9 – 9.5 |
| New York Harbor | 10.5 (2) | 9.5 |
| Philadelphia district | 10.5 (2) | 9.5 |
| Boston | 11 (2) | 10 |
| Providence | 11 (1) | 10 (2) |

## Pacific Export

(Quotations at seaboard, Los Angeles, cargo lots, except where otherwise noted.)

| Prices Effective | Sept. 15 | Sept. 8 |
|---|---|---|
| 375 e.p. blend, 70 oct. | 6.375– 6.5 | 6.375– 6.5 |
| 390 e.p. blend, 68 oct. | 6.25 – 6.375 | 6.25 – 6.375 |
| 390 e.p. blend, 66 oct. | 5.875– 6.125 | 5.875– 6.125 |
| 400 e.p. blend, 65 oct. min. | 5.875– 6.125 | 5.875– 6.125 |
| U. S. Motor, under 65 octane | 5.625– 5.875 | 5.625– 5.875 |
| 38-40 grav. w.w. kero., 150 fire point | 4.5 – 5 | 4.5 – 5 |
| 41-43 grav., w.w. kero. | 4.75 – 5 | 4.75 – 5 |
| 44-grav., w.w. kero. | 5 – 5.5 | 5 – 5.5 |
| Diesel fuel, 24 & above | $1.25 –$1.30 | $1.25 –$1.30 |
| Diesel fuel, under 24 | $1.15 –$1.25 | $1.15 –$1.25 |
| 30-34 grav. diesel (gas oil) Pac. Spec. 200 | $1.25 –$1.35 | $1.25 –$1.35 |
| Grade C fuel, Pac. Spec. 400 | $0.85 –$0.90 | $0.85 –$0.90 |
| *In Ship's Bunkers, or deep tank lots:* | | |
| Diesel fuel, Pac. Spec. 200 | $1.35 –$1.45 | $1.35 –$1.45 |
| Grade C fuel, Pac. Spec. 400 | $0.85 –$0.90 | $0.85 –$0.90 |
| *Cased Goods:* (Per case) | | |
| 375-400 e.p. blend, 65 oct. & above | $1.50 –$1.60 | $1.50 –$1.60 |
| 400 e.p. blend, under 65 oct. | $1.40 –$1.50 | $1.40 –$1.50 |
| U. S. Motor | $1.35 –$1.45 | $1.35 –$1.45 |
| 40-43 grav. w.w. kero., 150 fire point | $1.30 –$1.40 | $1.30 –$1.40 |
| Kero., p.w. | $1.25 –$1.35 | $1.25 –$1.35 |

## Tanker Rates

(Approximate last paid rates, cents per bbl.; Gulf-N. Atlantic, not East of N. Y.)

| | |
|---|---|
| Hvy. Crude & Fuel (10 to 19.9 gravity) | 57 |
| Light Crude, (30 grav. or Lighter) | 50 |
| Gasoline | 50 |
| Kerosine | 53 |
| No. 2 Fuel | 57 |

## Gulf Coast

**(Prices for sales made or firm offers reliably reported for sales pending in cargoes FOB ship at Gulf, for minimum of 20,000 bbls. Prices are by refiners only to other refiners, export agents, or to large tanker terminal operators at the customary trade specifications noted.)**

**Prices Effective Sept. 15**

| Motor Gasoline Domestic | |
|---|---|
| Min. 80 oct. '39 Research, max. 2cc lead | 6.5 |
| **60-62, Gravity, Max. 400 e.p.** | |
| 72-74 oct. leaded (ASTM) | 6.25 – 6.375 |
| 70 oct. unleaded " | 6.25 – 6.625 |
| 68 oct. " " | 6.25 – 6.5 |
| 65 oct. " " | 5.75 – 6 |
| 60 oct. " " | 5.5 – 5.75 |
| 41-43 w.w. kerosine | 3.75 – 4 |
| No. 2 fuel | 3.5 – 4 |
| **Gas Oil**—Less than ½ of 1% sulfur. | |
| Below 43 diesel index | 3.75 |
| 43-47 " " | 3.75 |
| 48-52 " " | 3.875 |
| 53-57 " " | 4 |
| 58 & above diesel index | 4.125 |
| Diesel Oil, ships' bunkers (ex-lighterage) | $1.55 |
| Bunker C, " " " | $0.85 –$0.95 |
| Bunker C, cargoes | $0.85 –$0.96 |

| Motor Gasoline Export | |
|---|---|
| **60-62 Gravity, Max. 400 e.p.** | |
| 72-74 oct. leaded (ASTM) | 6.25 – 6.375 |
| 70 oct. unleaded " | 6.25 – 6.625 |
| 68 oct. " " | 6.25 – 6.5 |
| 65 oct. " " | 5.75 – 6 |
| 60 oct. " " | 5.5 – 5.75 |
| 41-43 w.w. kerosine | 3.75 – 4 |
| **Gas Oil**—Less than ½ of 1% sulfur. | |
| Below 43 diesel index | 3.75 |
| 43-47 " " | 3.75 |
| 48-52 " " | 3.875 |
| 53-57 " " | 4 |
| 58 & above diesel index | 4.125 |

**MID-CONTINENT LUBES**

(At Gulf; in packages, FAS.; in bulk, FOB terminals)

| | Sept. 15 New Steel Drums | Bulk |
|---|---|---|
| 200 vis. D 210 brt. stock | 34 (2) | 27.8–28.8 (2) |
| 150 vis. D 210 brt. stock 0-10 p.p. | 30 (2) | 23.3–24.8 (2) |
| 10-25 p.p. | 29.5 (1) | 24.3 (1) |
| 100 vis. D 210 brt. stock 0-10 p.p. | 29.5 (1) | 24.3 (1) |
| 10-25 p.p. | 29 (1) | 23.8 (1) |
| 200 vis. No. 3 col. neutral: 0-10 p.p. | 22 (1) | 16.8 (1) |

**SOUTH TEXAS LUBES**

(Vis. at 100°, c. t. 0, blk. exprt. shp., FOB terminals)

| *Unfiltered Pale Oils:* Vis. Color | Sept. 15 | Sept. 8 |
|---|---|---|
| 100 No. 3 | 6.25–6.5 (2) | 6.25–6.5 (2) |
| 200 No. 3 | 7.75–8.75 (2) | 7.75–8.75 (2) |
| 300 No. 3 | 8.25–9.25 (2) | 8.25–9.25 (2) |
| 500 No. 3½ | 9.25–10.25 (2) | 9.25–10.25 (2) |
| 750 No. 4 | 9.75–11 (2) | 9.75–11 (2) |
| 1200 No. 4 | 10.25–11.5 (2) | 10.25–11.5 (2) |
| 2000 No. 4 | 12.5 (1) | 12.5 (1) |
| *Red Oils:* | | |
| 100 No. 5-6 | 6.5 (1) | 6.5 (1) |
| 200 No. 5-6 | 7.75–8.75 (2) | 7.75–8.75 (2) |
| 300 No. 5-6 | 8.25–9.25 (2) | 8.25–9.25 (2) |
| 500 No. 5-6 | 9.25–10.25 (2) | 9.25–10.25 (2) |
| 750 No. 5-6 | 9.75–11 (2) | 9.75–11 (2) |
| 1200 No. 5-6 | 10.25–11.5 (2) | 10.25–11.5 (2) |
| 2000 No. 5-6 | 11–12.5 (2) | 11–12.5 (2) |

# TANK WAGON PRICES

*Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline* **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include* 1.5c *federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect Sept.* 15, 1941 *as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

## S. O. New Jersey

**Esso (*Regular Grade*)**

| | Consumer Tank Car | Dealer T.W. | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| *Atlantic City, N. J | 8.5 | 9.5 | 4.5 | 7.9 |
| *Newark, N. J | 8.5 | 9.5 | 4.5 | 7.9 |
| Annapolis, Md | 8.35 | 9.85 | 5.5 | 9.7 |
| Baltimore, Md | 7.75 | 9.25 | 5.5 | 8.7 |
| Cumberland, Md | 9.15 | 10.65 | 5.5 | 10.2 |
| Washington, D. C | 8 | 9.5 | 3.5 | 9.2 |
| Danville, Va | 8.95 | 10.95 | 6.5 | 10.45 |
| Norfolk, Va | 7.75 | 9.75 | 6.5 | 10.2 |
| Petersburg, Va | 8.05 | 10.05 | 6.5 | 11.2 |
| Richmond, Va | 8.05 | 10.05 | 6.5 | 11.2 |
| Roanoke, Va | 9.25 | 11.25 | 6.5 | 10.7 |
| Charleston, W. Va | 9.05 | 11.55 | 6.5 | 11.5 |
| Parkersburg, W. Va | 8.35 | 10.85 | 6.5 | 11.2 |
| Wheeling, W. Va | 9.35 | 10.85 | 6.5 | 11.8 |
| Charlotte, N. C | 9.9 | 11.4 | 7.5 | 9.5 |
| Hickory | 10.45 | 11.95 | 7.5 | 10.5 |
| Mt. Airy, N. C | 10.3 | 11.8 | 7.5 | 9.7 |
| Raleigh, N. C | 9.65 | 11.15 | 7.5 | 10.5 |
| Salisbury, N. C | 9.95 | 11.45 | 7.5 | 10.9 |
| Charleston, S. C | 7.75 | 10.25 | 7.5 | .... |
| Columbia, S. C | 8.6 | 11.1 | 7.5 | .... |
| Spartanburg, S. C | 9.3 | 11.8 | 7.5 | .... |

| | Mineral Spirits T.W. | V.M.&P. T.W. |
|---|---|---|
| Newark, N. J | 12.5 | 14 |
| Baltimore, Md | 15 | .... |
| Washington, D. C | 15 | .... |

| Fuel Oils—T.W. | No. 1 | No. 2 | No. 3 |
|---|---|---|---|
| Atlantic City, N. J | 7.9 | 7.2 | 7.2 |
| Newark | 7.9 | 7.2 | 7.2 |
| Annapolis, Md | .... | 7.45 | .... |
| Baltimore | 7.7 | 7.2 | 7.2 |
| Washington, D. C | 8.2 | 7.45 | 7.45 |
| Norfolk, Va | 7.9 | 7 | 7 |
| Petersburg | 8.2 | 7.2 | .... |
| Richmond | 8.2 | 7.2 | 7.2 |
| Charlotte, N. C | 8.5 | 8.6 | .... |
| Hickory | .... | 8.2 | .... |
| Raleigh | 9.5 | 8.3 | .... |
| Charleston, S. C | .... | 7.2 | .... |
| Columbia | .... | 8.2 | .... |
| Spartanburg | .... | 9 | .... |

*Effective May 20, '41, minimum retail resale price of 13c posted thru New Jersey.

Discounts:

*Esso gasoline*—to undivided dealers, 0.5c off dealer t.w.

*Kerosine*—1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore city contract not necessary) except no discount in state of New Jersey.

*Naphthas*—To buyers taking following quantities at one time: Newark, 2c per gal. on 200 gals. or more, less than 200 gals. 0.5c higher price: Baltimore, 2c off on 25 to 100 gals. and 3c on over 100 gals.; Washington, 2c off to contract buyers.

## Socony-Vacuum Oil Co., Inc.

**Socony Mobilgas (*Regular Grade*)**

| | Com. Cons. T.W. | Undiv. Dlr. T.W. | Gaso-line Taxes |
|---|---|---|---|
| New York City: | | | |
| Manhattan & Bronx | 8.9 | 9.4 | *5.5 |
| Kings & Queens | 8.9 | 9.4 | *5.5 |
| Richmond | 8.5 | 9 | 5.5 |
| Albany, N. Y | 8.7 | 9.2 | 5.5 |
| Binghamton, N. Y | 9.8 | 10.3 | 5.5 |
| Buffalo, N. Y | 9 | 9.5 | 5.5 |
| Jamestown, N. Y | 9.2 | 9.7 | 5.5 |
| Mt. Vernon, N. Y | 8.9 | 9.4 | 5.5 |
| Plattsburg, N. Y | 9.8 | 10.3 | 5.5 |
| Rochester, N. Y | 9.6 | 10.1 | 5.5 |
| Syracuse, N. Y | 9.3 | 9.8 | 5.5 |
| Bridgeport, Conn | 8.8 | 9.3 | 4.5 |
| Danbury, Conn | 9.3 | 9.8 | 4.5 |
| Hartford, Conn | 9.4 | 9.9 | 4.5 |
| New Haven, Conn | 8.8 | 9.3 | 4.5 |
| Bangor, Me | 9.5 | 10 | 5.5 |
| Portland, Me | 9.1 | 9.6 | 5.5 |
| Boston, Mass | 8.7 | 9.2 | 4.5 |
| Concord, N. H | 10.2 | 10.7 | 5.5 |
| Lancaster, N. H | 10.8 | 11.3 | 5.5 |
| Manchester, N. H | 10.1 | 10.6 | 5.5 |
| Providence, R. I | 8.8 | 9.3 | 4.5 |
| Burlington, Vt | 9.7 | 10.2 | 5.5 |
| Rutland, Vt | 9.8 | 10.3 | 5.5 |

| | Mineral Spirits T.W. | V.M.&P. T.W. |
|---|---|---|
| Buffalo, N. Y | 11.9 | 13.1 |
| †New York City | 10.5 | 11.5 |
| Rochester, N. Y | 12.7 | 13.9 |
| Syracuse, N. Y | 13.5 | .... |
| Boston, Mass | 11.5 | 12.5 |
| Hartford Conn | 13.8 | 14.8 |
| Providence, R. I | 12.5 | 13.5 |

| | Kero-sine Yard | Kero-sine T.W. | Mobil-fuel Diesel TC | Mobil-fuel Diesel TW | Mobil-heat Fuel Yard | Mobil-heat Fuel TW |
|---|---|---|---|---|---|---|
| New York: | | | | | | |
| Manhat'n & Bronx | 5.5 | 8 | .... | 7.4 | 5.4 | 7 |
| Kings & Queens | 5.5 | 8 | .... | 7.4 | 5.4 | 7 |
| Richmond | 5.5 | 8 | .... | 7.4 | 5.4 | 7 |
| Albany | 5.7 | 7.7 | 5.5 | 7.5 | 5.5 | 7.2 |
| Binghamton | 7.1 | 9.1 | .... | 8.9 | 6.9 | 8.4 |
| Buffalo | 6.4 | 8.4 | 6.3 | 8.3 | 6.3 | 8 |
| Jamestown | 6.9 | 8.9 | .... | 8.8 | 6.8 | 8.2 |
| Mt. Vernon | 5.7 | 8.2 | .... | 7.6 | 5.6 | 7.2 |
| Plattsburg | 6.3 | 8.3 | .... | 8.1 | 6.1 | 7.6 |
| Rochester | 6.9 | 8.9 | 6.4 | 8.4 | 6.4 | 7.9 |
| Syracuse | 6.7 | 8.7 | 6.3 | 8.3 | 6.3 | 7.8 |
| Conn.: | | | | | | |
| Bridgeport | 5.8 | 7.8 | .... | .... | 5.7 | 7 |
| Danbury | 6.3 | 8.3 | .... | .... | 6 | 7.3 |
| Hartford | 5.9 | 7.9 | .... | 7.7 | 5.7 | 7.2 |
| New Haven | 5.6 | 7.6 | .... | 7.5 | 5.5 | 7.1 |
| Maine: | | | | | | |
| Bangor | 6.1 | 8.1 | 5.9 | 7.9 | 5.9 | 7.3 |
| Portland | 5.7 | 8.1 | 5.5 | 7.5 | 5.5 | 7.2 |
| Mass.: | | | | | | |
| Boston | 5.8 | 8 | 5.6 | 7.6 | 5.6 | 7.2 |
| N. H.: | | | | | | |
| Concord | 6.6 | 8.6 | .... | .... | 6.7 | 8.2 |
| Lancaster | 7.7 | 9.7 | .... | .... | 7.7 | 9.2 |
| Manchester | 6.7 | 9 | .... | .... | 6.4 | 7.9 |
| R. I.: | | | | | | |
| Providence | 5.8 | 7.8 | 5.6 | 7.6 | 5.6 | 7.1 |
| Vermont: | | | | | | |
| Burlington | 6.3 | 8.3 | 6 | 8 | 6 | 7.4 |
| Rutland | 6.5 | 8.5 | .... | 8.2 | 6.2 | 7.7 |

*Plus 2% city sales tax computed at time of each sale.

†Prices apply to consumers only in quantities over 1000 gals. annually; for quantities under 1000 gals. annually, add 0.5c per gal.

Discounts: Diesel—On t.w. deliveries, 0.5c for at least 400 gals.; 1c for full tank truck.

## Atlantic Refining

**Atlantic White Flash Gasoline (*Regular Grade*)**

| | Commer-cial T.C. | Dealer T.W. | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| Philadelphia, Pa | 8.5 | 9.5 | 5.5 | 10.15 |
| Pittsburgh | 9 | 10 | 5.5 | 10.5 |
| Allentown | 9 | 10 | 5.5 | 10.5 |
| Erie | 9 | 10 | 5.5 | 10 |
| Scranton | 9 | 10 | 5.5 | 10.5 |
| Altoona | 9 | 10 | 5.5 | 10.5 |
| Emporium | 9 | 10 | 5.5 | 10.5 |
| Indiana | 9 | 10 | 5.5 | 10.5 |
| Uniontown | 9 | 10 | 5.5 | 10.5 |
| Harrisburg | 9 | 10 | 5.5 | 10.5 |
| Williamsport | 9 | 10 | 5.5 | 10.5 |
| Dover, Del | .... | 10 | 5.5 | 10.5 |
| Wilmington, Del | .... | 9.5 | 5.5 | 10 |
| Boston, Mass | .... | 9.7 | 4.5 | 8 |
| Springfield, Mass | .... | 10.6 | 4.5 | 8.9 |
| Worcester, Mass | .... | 10.3 | 4.5 | 8.5 |
| Fall River, Mass | .... | 9.8 | 4.5 | 8.6 |
| Hartford, Conn | .... | 10.4 | 4.5 | 7.9 |
| New Haven, Conn | .... | 9.8 | 4.5 | 9 |
| Providence, R. I | .... | 9.8 | 4.5 | 8.6 |
| Atlantic City, N. J | .... | 9.5 | 4.5 | 7.9 |
| Camden, N. J | .... | 9.5 | 4.5 | 7.9 |
| Trenton, N. J | .... | 9.5 | 4.5 | 7.9 |
| Annapolis, Md | .... | 9.85 | 5.5 | 8.7 |
| Baltimore, Md | .... | 9.25 | 5.5 | 7.7 |
| Hagerstown, Md | .... | 10.35 | 5.5 | 8.2 |
| Richmond, Va | .... | 10.05 | 6.5 | 10.2 |
| Wilmington, N. C | .... | 10.35 | 7.5 | 9.8 |
| Brunswick, Ga | .... | 9.5 | 7.5 | *9 |
| Jacksonville, Fla | .... | 9.5 | 8.5 | 10 |

| | Mineral Spirits T.W.† | V.M.&P. T.W.† |
|---|---|---|
| Philadelphia, Pa | 10.5 | 12 |
| Lancaster, Pa | 11.5 | 13 |
| Pittsburgh, Pa | 12.5 | 12.5 |

| Fuel Oils—T.W. | 1 | 2 | 3 | 5 | 6 |
|---|---|---|---|---|---|
| Phila., Pa | 8 | 7.2 | 7.2 | 4.75 | 3.75 |
| Allentown, Pa | 8.5 | 7.5 | 7.5 | .... | .... |
| Wilmington, Del | 8.00 | 7.2 | 7.2 | .... | .... |
| Springfield, Mass | 8.9 | 7.6 | 7.6 | .... | .... |
| Worcester, Mass | 8.5 | 7.5 | 7.5 | .... | .... |
| Hartford, Conn | 7.9 | 7.2 | 7.2 | .... | .... |

*Does not include 1c Georgia kerosine tax.

†Mineral Spirits prices also apply to Stoddard Solvent; V.M.&P. prices also apply to Light Cleaners Naphtha.

Discounts:

Gasoline—to undivided dealers, 0.5c off dealer t.w., except Georgia & Florida dealer t.w. and undivided dealer t.w. prices are same.

Kerosine—Thru Penna. & Delaware, 2c off t.w. price on t.w. deliveries of 25 gals. or more at one time.

## S. O. Ohio††

***Sohio X-70 Gasoline**

**(*Regular Grade*)**

| | Con-sumer T.W. | **Re-sellers | Gaso-line ‡S.S. | Gaso-line Taxes | †Kero-sine T.W. |
|---|---|---|---|---|---|
| Ohio, Statewide | 12 | 10 | 13.5 | 5.5 | 9 |
| Akron | 12 | 9.5 | 12 | 5.5 | 9 |
| Cincinnati | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Cleveland | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Columbus | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Dayton | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Marietta | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Portsmouth | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Toledo | 12 | 9.5 | 12.5 | 5.5 | 9 |
| Youngstown | 12 | 9.5 | 12.5 | 5.5 | 9 |

**Aviation Gasoline—Statewide**

| | Consumer T.W. | Gasoline Taxes |
|---|---|---|
| Sohio Aviation | 14.5 | 5.5 |
| Esso Ethyl Aviation 74 Oct. | 15.5 | 5.5 |
| Esso Ethyl Aviation 80 Oct. | 16.5 | 5.5 |
| Esso Ethyl Aviation 91 Oct. | 17.5 | 5.5 |
| Esso Ethyl Aviation 100 Oct. | 24.5 | 5.5 |

| | †Naphthas—T.W. State-wide | Lucas County |
|---|---|---|
| S. R. Solvent | 13.5 | 13.5 |
| D. C. Naphtha | 14.5 | 14.25 |
| V.M.&P. Naphtha | 14.5 | 14.25 |
| Varnolene | 14.5 | 14.25 |
| Sohio Solvent | 14.5 | 14.25 |

| Fuel Oils—T.W. | No. 1 | No. 2 | No. 3 | No. 4 |
|---|---|---|---|---|
| Ohio, Statewide | 8 | 8 | 7.5 | .... |
| Cleveland | 10 | 10 | 9.5 | 7.25 |

*Renown (third-grade) prices are same as X-70 unless otherwise noted.

**Except authorized agents.

†Kerosine prices are ex 1c state tax. Naphtha prices are ex 1.5c federal & 4c state tax.

‡Prices at company-operated stations.

††Statewide prices are subject to exceptions other than those shown.

Discounts:

Esso aviation—on contract to hangar operators and resellers, 2c off consumer t.w.

Fuel Oils—Statewide prices are for t.w. & drum deliveries of 50 gals. or more; prices for deliveries of less than 50 gals. are 0.5c higher. Cleveland Nos. 1, 2, and 3 prices are for bulk deliveries of 5 to 99 gals.; 100 gals. and over are 2c less. Cleveland No. 4 price is for full compartment hose dump only.

Naphthas—to contract consumers off t.w. prices—Statewide: 300 to 999 gals., 0.5c; 1000 to 2499 gals., 0.75c; 2500 to 4999 gals., 1c; 5000 or more gals., 1.5c. Lucas County: Less than 50 gals., tank wagon price; 50 to 249 gals., 0.5c; 250 to 499 gals., 1c; 500 gals. or over, 1.5c.

## S. O. Kentucky

**Crown Gasoline (*Regular*)**
**Standard (*Third Grade*)**

| | †Net Dealer Crown | Standard | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| Covington, Ky | 9.5 | 8.5 | 6.5 | 9 |
| Lexington, Ky | 10.5 | 9.5 | 6.5 | 9 |
| Louisville, Ky | 10 | 9 | 6.5 | 8.5 |
| Paducah, Ky | 10 | 9 | 6.5 | 8.5 |
| Jackson, Miss | 10 | 9 | 7.5 | *8.5 |
| Vicksburg, Miss | 9.5 | 8.5 | 7.5 | *8 |
| Birmingham, Ala | 10 | 9 | *8.5 | 8 |
| Mobile, Ala | 9 | 7 | *9.5 | 8.5 |
| Montgomery, Ala | 10 | 9 | *9.5 | *9 |
| Atlanta, Ga | 10.5 | 9.5 | 7.5 | *9 |
| Augusta, Ga | 10.5 | .... | 7.5 | *8.5 |
| Macon, Ga | 10.5 | 9.5 | 7.5 | *9 |
| Savannah, Ga | 9.5 | .... | 7.5 | *8 |
| Jacksonville, Fla | 9.5 | 8.5 | 8.5 | 8 |
| Miami, Fla | 9.5 | .... | 8.5 | 8 |
| Pensacola, Fla | 9 | 8 | *9.5 | 8 |
| Tampa, Fla | 9.5 | 8.5 | 8.5 | 8 |

*Taxes: In tax column are included these city and county gasoline taxes: Mobile, 2c city; Birmingham, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have 1c kerosine tax, Mississippi 0.5c, not included in above prices.

†Consumer t.w. prices are same as net dealer prices.

## S. O. Indiana

**Red Crown (*Regular Grade*)**
**Standard (*Third Grade*)**

| | Red Crown Cons. | Dealer Prices Red Stano-lind | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| Chicago, Ill | 11.6 | 9.6 | 8.5 | 4.5 | 10.3 |
| Decatur, Ill | 10.9 | 8.9 | 8 | 4.5 | 9.5 |
| Joliet, Ill | 11.9 | 9.6 | 8.5 | 4.5 | 10.3 |

(Continued on next page)

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:

Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 25 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.

Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

# TANK WAGON PRICES

*Commercial or consumer tank car, tank wagon, dealer, and service station prices for gasoline* **do not include taxes;** *they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include* 1.5c *federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes where levied are indicated in footnotes. Dealer discounts are shown in footnotes. These prices in effect Sept.* 15, 1941 *as posted by principal marketing companies at their headquarters offices, but subject to later correction.*

## S. O. Indiana (Cont'd)

**Red Crown (*Regular Grade*)**
**Stanolind (*Third Grade*)**

| | Red Crown Cons. T.W. | Dealer Prices Red Crown | Stano-lind | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|---|
| Peoria, Ill. | 11.7 | 10.2 | 9.7 | 4.5 | 10.1 |
| Quincy, Ill. | 8.9 | 7.9 | 7.9 | 4.5 | 10 |
| Indianapolis, Ind. | 11.6 | 9.7 | 9.6 | 5.5 | *9.8 |
| Evansville, Ind. | 11.4 | 9.9 | 9.4 | 5.5 | *9.6 |
| South Bend, Ind. | 12 | 10.5 | 10 | 5.5 | *10.2 |
| Detroit, Mich. | 11.4 | 9.9 | 9.4 | 4.5 | 9.6 |
| Grand Rapids, Mich. | 11.4 | 9.9 | 9.4 | 4.5 | 9.6 |
| Saginaw, Mich. | 11.4 | 9.9 | 9.4 | 4.5 | 9.6 |
| Green Bay, Wis. | 12.2 | 10.7 | 10.2 | 5.5 | 10.6 |
| Milwaukee, Wis. | 12.1 | 10.6 | 10.1 | 5.5 | 10.5 |
| La Crosse, Wis. | 11.9 | 10.4 | 9.9 | 5.5 | 10.3 |
| Minneapolis-St. Paul. | 11.9 | 10.4 | 9.9 | 5.5 | 10.3 |
| Duluth, Minn. | 12.2 | 10.7 | 10.2 | 5.5 | 10.6 |
| Mankato, Minn. | 11.9 | 10.4 | 9.5 | 5.5 | 10.3 |
| Des Moines, Ia. | 11.4 | 7.4 | 6.9 | 4.5 | *9.8 |
| Davenport, Ia. | 11.7 | 10.2 | 9.7 | 4.5 | *10.1 |
| Mason City, Ia. | 11.7 | 10.2 | 9.7 | 4.5 | *10.1 |
| St. Louis, Mo. | 10.3 | 8.8 | 8.6 | *4.5 | 9.8 |
| Kansas City, Mo. | 10.4 | 8.9 | 7.9 | *4.5 | 9.4 |
| St. Joseph, Mo. | 11.2 | 9.7 | 8.7 | *4.5 | 9.6 |
| Fargo, N. D. | 12.9 | 9.4 | 10.5 | 5.5 | 11.3 |
| Huron, S. D. | 12.3 | 10.8 | 10.3 | 5.5 | 10.7 |
| Wichita, Kans. | 10.3 | 8.2 | 6.5 | 4.5 | 8 |

**Stanavo Aviation 73 Octane**

| | | |
|---|---|---|
| Chicago, Ill. | 15.7 | 4.5 |
| Milwaukee, Wis. | 15.9 | 5.5 |
| Minneapolis, Minn. | 15.7 | 5.5 |
| St. Louis, Mo. | 15.2 | *4.5 |
| Kansas City, Mo. | 14.8 | *4.5 |
| Fargo, N. D. | 16.7 | 5.5 |
| Huron, S. D. | 16.1 | 5.5 |

| | Oleum Spirits | V.M.&P. Naphtha | Stani-sol | *Taxes |
|---|---|---|---|---|
| | (Prices are base prices before discounts) | | | |
| Chicago | 13.5 | 13.8 | 12.8 | 4.5 |
| Detroit | 15.8 | 15 | 16.3 | 4.5 |
| K. C., Mo. | 13.3 | 14.3 | 13.8 | 1.5 |
| St. Louis, Mo. | 13.7 | 14.7 | 13.2 | 1.5 |
| Milwaukee | 14.4 | 15.4 | 13.1 | 5.5 |
| Minnep'ls | 14.2 | 15.2 | 13.5 | 5.5 |

| | Fuel Oils T.W. Standard Heater Oil Chicago: |
|---|---|
| 1-99 gals. | 8.75 |
| 100-149 gals. | 7.75 |
| 150 gals. & over | 7.25 |

| | Stanolex Fuel Oil No. 1 | Stanolex Furnace Oil |
|---|---|---|
| 1-99 gals. | 8.5 | 8.5 |
| 100-149 gals. | 7.5 | 7.5 |
| 150-399 gals. | 7.25 | 7.25 |
| 400 gals. & over | 6.75 | 6.75 |

| | Stanolex Fuel Oil A | Stanolex Fuel Oil B |
|---|---|---|
| 1-99 gals. | 8 | 8 |
| 100-399 gals. | 7 | 7 |
| 400-749 gals. | 6 | 6 |
| 750 gals. & over | 5.25 | 5.25 |

| | Stanolex Bunker C Fuel Oil |
|---|---|
| 1-399 gals | 6.5 |
| 400-999 gals | 5.5 |
| 1000 gals. & over | 4.5 |

| Other Points: | Stanolex No. 1 | Stanolex Furnace Oil |
|---|---|---|
| Indianapolis | | |
| 1-99 gals. | ... | *8.7 |
| 100 gals. & over | ... | *7.7 |
| Detroit | | |
| 1-99 gals. | ... | 7.8 |
| 100 gals. & over | ... | 6.8 |
| Milwaukee | | |
| 1-99 gals. | 9.2 | 8.7 |
| 100 gals. & over | 8.2 | 7.7 |
| Minneapolis | | |
| 1-99 gals. | 8.5 | 8.5 |
| 100 gals. & over | ... | 7.5 |
| 100-199 gals. | 8 | ... |
| 200 gals. & over | 7.5 | ... |
| St. Louis | | |
| 1-99 gals. | 8.3 | 7.8 |
| 100 gals. & over | 7.3 | 6.8 |
| Kansas City | | |
| 1-49 gals. | 7.8 | ... |
| 50 gals. & over | 6.8 | ... |
| 1-99 gals. | ... | 7.8 |
| 100 gals. & over | ... | 6.8 |

*Taxes: In gasoline tax column are included these city taxes—Kansas City, St. Joseph, and St. Louis, 1c. Indiana kerosine and fuel oil prices are ex 4c state tax: Iowa kerosine prices are ex 3c state tax. In naphtha tax column are included 1.5c federal tax and state taxes.

## S. O. Nebraska

**Standard Red Crown Gasoline (*Regular Grade*)**

| | T.W. | Dealer | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| Omaha | 11.4 | 8.9 | 6.5 | 9.8 |
| McCook | 12 | 9.4 | 6.5 | 9.5 |
| Norfolk | 11.9 | 10.4 | 6.5 | 10.3 |
| North Platte | 12.3 | 9.9 | 6.5 | 10.7 |
| Scottsbluff | 12.4 | 9.5 | 6.5 | 10 |

## S. O. Louisiana

**Esso Gasoline (*Regular Grade*)**

| | Consumer Tank Car | Dealer T.w. | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| New Orleans, La. | 6.75 | 9.25 | 8.5 | *9 |
| Baton Rouge, La. | 6.75 | 9.25 | 8.5 | *9.5 |
| Alexandria, La. | 6.75 | 9.25 | 8.5 | *9.5 |
| Lafayette, La. | 7 | 9.5 | 8.5 | *9 |
| Lake Charles, La. | 7 | 9.5 | 8.5 | *9 |
| Shreveport, La. | 6.5 | 9 | 8.5 | *8 |
| Knoxville, Tenn. | 9.5 | 12 | 8.5 | 12.5 |
| Memphis, Tenn. | 7.75 | 10.25 | 8.5 | 10.5 |
| Chattanooga, Tenn. | 9 | 11 | 8.5 | 11 |
| Nashville, Tenn. | 9.25 | 11 | 8.5 | 10 |
| Bristol, Tenn. | 9.75 | 10.25 | 8.5 | 12 |
| Little Rock, Ark. | 7.5 | 10 | 8 | 10 |

*Louisiana kerosine prices are ex 1c state tax.
Discounts:
Esso Gasoline—To undivided dealers, 0.5c off dealer t.w.

## Humble Oil & Refining Co.

**Humble Motor Fuel (*Regular Grade*)**
**Thriftane (*Third Grade*)**

| | Humble *Tank Wagon | Humble Re-tail | Thriftane *Tank Wagon | Thriftane Re-tail | Gaso-line Taxes |
|---|---|---|---|---|---|
| Dallas, Tex. | 8 | 12 | 6.5 | 9.5 | 5.5 |
| Ft. Worth, Tex. | 8 | 12 | 6.5 | 9.5 | 5.5 |
| Houston, Tex. | 8 | 12 | 6.5 | 9.5 | 5.5 |
| San Antonio, Tex. | 8 | 12 | 6.5 | 9.5 | 5.5 |

| | Kerosine *Tank Wagon | Kerosine Retail |
|---|---|---|
| Dallas, Tex. | 7 | 11 |
| Ft. Worth, Tex. | 7 | 11 |
| Houston, Tex. | 8 | 11 |
| San Antonio, Tex. | 7 | 10 |

| 74 Oct. Aviation Gasoline, Clear | Tank Car |
|---|---|
| FOB Baytown, Tex. | 8.5 |

*To all classes of dealers & consumers.

## The Texas Co.

| | Gasoline—Dealer Fire-Chief (*Regular*) | T.W. Indian (*3rd Grade*) | Gaso-line Taxes |
|---|---|---|---|
| Dallas, Tex. | 8 | 6.5 | 5.5 |
| Ft. Worth, Tex. | 8 | 6.5 | 5.5 |
| Wichita Falls, Tex. | 8 | 6.5 | 5.5 |
| Amarillo, Tex. | 8 | 6.5 | 5.5 |
| Tyler, Tex. | 8 | 6.5 | 5.5 |
| El Paso, Tex. | 10.5 | 9.5 | 5.5 |
| San Angelo, Tex. | 8 | 6.5 | 5.5 |
| Waco, Tex. | 8 | 6 | 5.5 |
| Austin, Tex. | 8 | 6.5 | 5.5 |
| Houston, Tex. | 8 | 6.5 | 5.5 |
| San Antonio, Tex. | 8 | 6.5 | 5.5 |
| Port Arthur, Tex. | 8 | 6.5 | 5.5 |

## Continental Oil Co.

| | Conoco Bronz-z-z (*Regular*) †Tank Wagon | De-mand (*3rd Grade*) | Gaso-line Taxes | Kero-sine T.W. |
|---|---|---|---|---|
| Denver, Col. | 10 | 9 | 5.5 | 11 |
| Grand Junction, Col. | 12.5 | 11.5 | 5.5 | 12.5 |
| Pueblo, Col. | 9.5 | 8.5 | 5.5 | 9.5 |
| Casper, Wyo. | 11.5 | 10.5 | 5.5 | 12 |
| Cheyenne, Wyo. | 10.5 | 9.5 | 5.5 | 11.5 |
| Billings, Mont. | 11.5 | 10.5 | 6.5 | 12.5 |
| Butte, Mont. | 10.5 | 9.5 | 6.5 | 13.5 |
| Great Falls, Mont. | 10.5 | 9.5 | 6.5 | 12.5 |
| Helena, Mont. | 10.5 | 9.5 | 6.5 | 13 |
| Salt Lake City, Utah. | 13.5 | 12.5 | 5.5 | 14.5 |
| Boise, Ida. | 13.6 | 12.6 | 6.5 | 16.5 |
| Twin Falls, Ida. | 14.6 | 13.6 | 6.5 | 17 |
| Albuquerque, N. M. | 10.5 | 9.5 | *7 | 10 |
| Roswell, N. M. | 8.5 | 7.5 | *7 | 8.5 |
| Santa Fe, N. M. | 10.5 | 9.5 | *7.5 | 10 |
| Ft. Smith, Ark. | 8.5 | 5.75 | *7 | 6.5 |
| Little Rock, Ark. | 9.25 | 6.15 | 8 | 8 |
| Texarkana, Ark. | 8.5 | 6.5 | *5.5 | 6 |
| Muskogee, Okla. | 8.5 | 7.5 | 7 | 8 |
| Oklahoma City, Okla. | 8 | 7.5 | 7 | 8 |
| Tulsa, Okla. | 8 | 7.5 | 7 | 8 |

*Taxes: In gasoline tax column are included these city taxes—Albuquerque, & Roswell, 0.5c; Santa Fe, 1c. Texas 4c state tax applies within city limits of Texarkana, Ark.; Okla. 5.5c state tax applies within city limits of Ft. Smith, Ark.
†To consumers & dealers.
Discounts: To dealers only—Cheyenne 1.5c on Bronz-z-z & Demand.

## S. O. California

**Standard Gasoline (*Regular Grade*)**
**Flight Gasoline (*Third Grade*)**

| | Standard Tank Truck Retail | | Flight Tank Truck Retail | | Gaso-line Taxes |
|---|---|---|---|---|---|
| San Francisco, Cal. | 13 | 14 | 11 | 12 | 4.5 |
| Los Angeles, Cal. | 12.5 | 13.5 | 10.5 | 11.5 | 4.5 |
| Fresno, Cal. | 14 | 15 | 12 | 13 | 4.5 |
| Phoenix, Ariz. | 15 | 16 | 12 | 13 | 6.5 |
| Reno, Nev. | 15 | 16 | 15 | 14 | 5.5 |
| Portland, Ore. | 13.5 | 14.5 | 11.5 | 12.5 | 6.5 |
| Seattle, Wash. | 13.5 | 14.5 | 11.5 | 12.5 | 6.5 |
| Spokane, Wash. | 15.5 | 16.5 | 13.5 | 14.5 | 6.5 |
| Tacoma, Wash. | 13.5 | 14.5 | 11.5 | 12.5 | 6.5 |

| | Stanavo Tank Truck | Aviation Gasoline Taxes | Kerosine Tank Truck |
|---|---|---|---|
| San Francisco, Cal. | 15.5 | 4.5 | 11.5 |
| Los Angeles, Cal. | 15 | 4.5 | 10 |
| Fresno, Cal. | 16.5 | 4.5 | 12.5 |
| Phoenix, Ariz. | 17.5 | 6.5 | 12.5 |
| Reno, Nev. | 17.5 | 5.5 | 13.5 |
| Portland, Ore. | 16 | 6.5 | 13.5 |
| Seattle, Wash. | 16 | 6.5 | 13.5 |
| Spokane, Wash. | 19 | 6.5 | 16.5 |
| Tacoma, Wash. | 16 | 6.5 | 13.5 |

Discounts:
To Resale & Commercial Consumers—3c off posted tank truck tax included price on Standard & Stanavo Aviation, 2c off on Flight. Deliveries less than 40 gals. to commercial consumer trade, 1c a gal. above posted tank truck tax included price, except single deliveries to Marine trade only which are billed at posted tank truck tax included price less 3c for Standard & Stanavo Aviation, and less 2c for Flight.
Kerosine—Tank car and truck & trailer deliveries, 3c off posted tank truck price; plant stem deliveries to jobbers, 2.5c off posted tank truck price.

## Canada

**PRICES OF IMPERIAL OIL, LTD.**

Per Imperial Gallon, which is 1.2 U. S. Gallons

**3-Star Imperial Gasoline (*Regular Grade*)**

| | †Gasoline T.W. | *Gasoline Taxes | †Kero-sine T.W. |
|---|---|---|---|
| Hamilton, Ont. | 16.5 | 11 | 18 |
| Toronto, Ont. | 16.5 | 11 | 18 |
| Brandon, Man. | 21 | 10 | 23 |
| Winnipeg, Man. | 20.5 | 10 | 22.5 |
| Regina, Sask. | 18 | 10 | 20 |
| Saskatoon, Sask. | 20.8 | 10 | 22.8 |
| Edmonton, Alta. | 18.9 | 10 | 20.9 |
| Calgary, Alta. | 16 | 10 | 18 |
| Vancouver, B. C. | 15 | 10 | 24 |
| Montreal, Que. | 16 | 11 | 17.5 |
| St. John, N. B. | 15.5 | 13 | 19 |
| Halifax, N. S. | 15.5 | 13 | 19 |

*Includes 3c Federal, and Provincial taxes.
†To divided & undivided dealers.

**Tank Wagon Price Changes**

(These changes have been made in price tables)

*S. O. Indiana—Red Crown Gasoline:*
Des Moines dealer cut 1c Sept. 12. Wichita dealer cut 0.6c Sept. 5.

*S. O. Indiana—Stanolind Gasoline:*
Des Moines dealer cut 1c Sept. 12. Wichita dealer cut 0.5c Sept. 5.

*S. O. California—Gasoline:*
Standard & Flight up 0.5c at Spokane Sept. 11.

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon:
Alabama 1/40c on gasoline, 1/2c on kerosine; Arkansas 1/20c; Florida 1/8c; Illinois 3/100c; Indiana 1/5c in lots of 25 bbls. or less, 2/25c in lots of more than 25 bbls.; Kansas 1/50c; Louisiana 1/32c; Minnesota 7/200c; Missouri 1/50c; Nebraska 3/100c; Nevada, gasoline 1/20c; North Carolina 1/4c; North Dakota 1/20c; Oklahoma 2/25c; South Carolina 1/8c; South Dakota 1/20c; Tennessee 2/5c; and Wisconsin 3/100c.
Kerosine inspection fees only: Iowa 3/50c; Michigan 1/5c per gal.

# CRUDE OIL PRICES

*Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown.*

## EASTERN & CENTRAL STATES FIELDS

### PENNSYLVANIA GRADE

**Posted by Jos. Seep Purch. Agency** (Aug. 23, '41)
Bradford-Allegany ..... $2.75
Southwest Penna. ..... $2.40
Eureka (West Va.) ..... $2.34
Corning, O. (May 27, '41) ..... $1.31

**Posted by The Pennzoil Co.** (Aug. 23, '41)
National Transit ..... $2.68*

**Posted by Valvoline Pipe Lines** (Aug. 23, '41)
Bradford (Elk & McKean Counties, Pa.) ..... $2.75
Warren, Forest, Venango, Clarion & Butler Counties, Pa. ..... $2.68
Alleghany, Beaver, Washington & Greene Counties, Pa. ..... $2.40
West Virginia ..... $2.34
Southeastern Ohio ..... $2.30

*Applies to Cochran, Franklin, Hamilton & Doolittle districts; prices in other lower districts range down to $2.63 per bbl. at well.

### MICHIGAN

**Posted by Pure Oil Co.** (May 27, '41)
Midland, Midland County ..... $1.44
Sherman ..... $1.39

**Posted by Simrall Corp.** (May 27, '41)
Greendale, Porter, Vernon, Crystal & Wise ..... $1.44
Buckeye, Bentley, Edenville, Beaverton & Monitor (sweet crude type) ..... $1.42
Freeman, Redding, Lincoln & Winterfield ..... $1.39
West Branch-Arenac ..... $1.24
Hamilton-Grout ..... $1.29

**Posted by Sohio Corp. (Mich. Div.)**
Traverse crude in Allegan, Kent, Ottawa & Van Buren Cos. (June 2, '41) ..... $1.45
Trenton crude, Monroe Co. (June 2, '41) ..... $1.39

**Posted by Bay Pipe Line Corp.** (May 27, '41)
Saginaw & Wise ..... $1.44
Clare ..... $1.11
Buckeye, Bentley & Kawkawlin ..... $1.42
Adams (June 1, '41) $1.27

### ILLINOIS-INDIANA-KENTUCKY-OHIO

**Posted by Sohio Corp.** (May 21, '41)
Illinois Basin, including Griffin pool ..... $1.37
Carmi Storms, Ill. area ..... $1.32
Birk City, Ky. area ..... $1.32
Corydon, Ky. area, Henderson ..... $1.32

**Posted by Ohio Oil Co.** (May 21, '41)
Illinois Basin ..... $1.37
Eastern Ill. & Western Ind. ..... 1.22

**Posted by Carter Oil Co.** (May 21, '41)
Louden, Fayette Co. Ill. ..... $1.37

**Posted by Mohawk Oil Lines, Inc.** (May 21, '41)
Southern Illinois ..... $1.37

**Posted by Ashland Oil & Transp. Co.**
**Somerset oil in Ash. Lines, Ky.;** (June 19, '41)
Big Sandy River ..... $1.38
Kentucky River ..... $1.43

**Posted by Owensboro-Ashland Co.**
Owensboro, Ky. area (May 21, '41) ..... $1.32

**Posted by S. O. Ohio** (Sept. 1, '41)
Lima, O. ..... $1.25
Cleveland, Lodi & Chatham (O.) areas ..... $1.30

## MID-CONTINENT

### OKLAHOMA-KANSAS-NORTH TEXAS

(See below for companies posting and dates)

| Gravity | Schedule No. 1 | Schedule No. 2 | Schedule No. 3 | Schedule No. 4 |
|---|---|---|---|---|
| Below 21 | $0.85 | $0.75 | $0.70 | $0.78 |
| 21-21.9 | .87 | .78 | .73 | .80 |
| 22-22.9 | .89 | .81 | .76 | .82 |
| 23-23.9 | .91 | .84 | .79 | .84 |
| 24-24.9 | .93 | .87 | .82 | .86 |
| 25-25.9 | .95 | .90 | .85 | .88 |
| 26-26.9 | .97 | .93 | .88 | .90 |
| 27-27.9 | .99 | .96 | .91 | .92 |
| 28-28.9 | 1.01 | .99 | .94 | .94 |
| 29-29.9 | 1.03 | 1.02 | .97 | .96 |
| 30-30.9 | 1.05 | 1.05 | 1.00 | .98 |
| 31-31.9 | 1.07 | 1.07 | 1.02 | 1.00 |
| 32-32.9 | 1.09 | 1.09 | 1.04 | 1.02 |
| 33-33.9 | 1.11 | 1.11 | 1.06 | 1.04 |
| 34-34.9 | 1.13 | 1.13 | 1.08 | 1.06 |
| 35-35.9 | 1.15 | 1.15 | 1.10 | 1.08 |
| 36-36.9 | 1.17 | 1.17 | 1.12 | 1.10 |
| 37-37.9 | 1.19 | 1.19 | 1.14 | 1.12 |
| 38-38.9 | 1.21 | 1.21 | 1.16 | 1.14 |
| 39-39.9 | 1.23 | 1.23 | 1.18 | 1.16 |
| 40 & above | 1.25 | 1.25 | 1.20 | 1.18 |

**Above schedules posted by:**

No. 1: **S. O. Indiana** May 20, '41 in Okla. & Kans. **Sinclair-Prairie** May 20, '41 in Okla. & Kans. beginning with 25-25.9. **Continental** May 19, '41 in Okla. & Kans. beginning with Below 29 at $1.01. **Texaco** May 19, '41 in Okla. & Kans. beginning with 28-28.9 at $1.01.

No. 2: **Carter** May 20, '41 in Okla. **Shell** May 19, '41 in Okla. & Kans. (exclusive of Carter Co., Okla.) **Magnolia** May 21, '41 in Okla.

No. 3: **Shell** May 19, '41 in Carter Co., Okla.

No. 4: **Stanolind** May 20, '41 in N. Texas. **Magnolia** May 21, '41 in N. & N. Central Texas. **Sinclair-Prairie** May 21, '41 in N. Central Texas. **Continental** May 21, '41 in N. Texas. **Texaco** May 21, '41 in N. & N. Central Texas. **Magnolia, Sinclair-Prairie & Continental** schedules begin with Below 29 at $0.94. **Texaco** schedule begins with 28-28.9 at $0.94.

## TEXAS & NEW MEXICO FIELDS

**Posted by Humble Oil & Refining Co.**

(May 21, '41, except Panhandle, Tex. July 9, '41)

| Gravity | Refugio | Texas Gulf Coast | Mirando | Anahuac | Dickinson | East Central Texas | West Central Texas | Panhandle, Texas | W. Texas & New Mex. | Hawkins Texas |
|---|---|---|---|---|---|---|---|---|---|---|
| Below 20 | $1.08 | $1.06 | $1.03 | $0.98 | $0.93 | .... | .... | $0.73 | $0.70 | $0.80 |
| 20-20.9 | 1.10 | 1.08 | 1.05 | 1.00 | .95 | .... | .... | .75 | .72 | .82 |
| 21-21.9 | 1.12 | 1.10 | 1.07 | 1.02 | .97 | .... | .... | .77 | .74 | .84 |
| 22-22.9 | 1.14 | 1.12 | 1.09 | 1.04 | .99 | .... | .... | .79 | .76 | .86 |
| 23-23.9 | 1.16 | 1.14 | 1.11 | 1.06 | 1.01 | .... | .... | .81 | .78 | .88 |
| 24-24.9 | 1.18 | 1.16 | 1.13 | 1.08 | 1.03 | .... | .... | .83 | .80 | .90 |
| 25 & above | .... | .... | .... | .... | .... | .... | .... | .... | .... | .92 |
| 25-25.9 | 1.20 | 1.18 | 1.15 | 1.10 | 1.05 | $0.97 | $0.88 | .85 | .82 | .... |
| 26-26.9 | 1.22 | 1.20 | 1.17 | 1.12 | 1.07 | .99 | .90 | .87 | .84 | .... |
| 27-27.9 | 1.24 | 1.22 | 1.19 | 1.14 | 1.09 | 1.01 | .92 | .89 | .86 | .... |
| 28-28.9 | 1.26 | 1.24 | 1.21 | 1.16 | 1.11 | 1.03 | .94 | .91 | .88 | .... |
| 29-29.9 | 1.28 | 1.26 | 1.23 | 1.18 | 1.13 | 1.05 | .96 | .93 | .90 | .... |
| 30-30.9 | 1.30 | 1.28 | 1.25 | 1.20 | 1.15 | 1.07 | .98 | .95 | .92 | .... |
| 31-31.9 | 1.32 | 1.30 | 1.27 | 1.22 | 1.17 | 1.09 | 1.00 | .97 | .94 | .... |
| 32-32.9 | 1.34 | 1.32 | 1.29 | 1.24 | 1.19 | 1.11 | 1.02 | .99 | .96 | .... |
| 33-33.9 | 1.36 | 1.34 | 1.31 | 1.26 | 1.21 | 1.13 | 1.04 | 1.01 | .98 | .... |
| 34-34.9 | 1.38 | 1.36 | 1.33 | 1.28 | 1.23 | 1.15 | 1.06 | 1.03 | 1.00 | .... |
| 35-35.9 | 1.40 | 1.38 | 1.35 | 1.30 | 1.25 | 1.17 | 1.08 | 1.05 | 1.02 | .... |
| 36-36.9 | 1.42 | 1.40 | 1.37 | 1.32 | 1.27 | 1.19 | 1.10 | 1.07 | 1.04 | .... |
| 37-37.9 | 1.44 | 1.42 | 1.39 | 1.34 | 1.29 | 1.21 | 1.12 | 1.09 | 1.06 | .... |
| 38-38.9 | 1.46 | 1.44 | 1.41 | 1.36 | 1.31 | 1.23 | 1.14 | 1.11 | 1.08 | .... |
| 39-39.9 | 1.48 | 1.46 | 1.43 | 1.38 | 1.33 | 1.25 | 1.16 | 1.15 | 1.10 | .... |
| 40 & above | 1.50 | 1.48 | 1.45 | 1.40 | 1.35 | 1.27 | 1.18 | 1.15 | 1.12 | .... |

**Refugio:** Includes crude purchased in East White Point, Greta, Melon Creek, O'Connor-McFaddin, Plymouth, Saxet, Taft, & Tom O'Connor fields.

**Texas Gulf Coast:** Includes crude purchased in Amelia, Clear Lake, Goose Creek, Hastings, Magnet, Mykawa, Mykawa New, Raccoon Bend, South Thompsons, Sugarland, Thompsons, & Webster fields.

**Mirando:** Includes crude purchased in Blanchard, Bridwell, Colorado, Comitas, Eagle Hill, Escobas, Fitzsimmons, Glen, Government Wells (North & South), Heyser, Hoffman, Kelsey, Kohler, Loma Novia, Lundell, Manila, Mirando Valley, Placedo, Randado, Sarnosa, & Tesoro fields.

**Anahuac:** Includes crude purchased in Anahuac, Angleton, Cedar Point, Fishers' Reef, Hull (Old & New), Pierce Junction, Red Fish Reef, & Turtle Bay fields.

**Dickinson:** Includes crude purchased in Dickinson, Gillock, Hardin, League City, & Rowan fields.

**East Central Texas:** Includes crude purchased in Anderson, Cherokee, Limestone, & Navarro Counties, and Navarro Crossing field.

**West Central Texas:** Includes crude purchased in Brown, Callahan, Comanche, Eastland, Fisher, Haskell, Jones, Shackelford, Stephens, & Throckmorton Counties.

**Panhandle, Texas:** Includes crude purchased in Carson, Gray, Hutchinson & Wheeler Counties.

**West Texas & New Mexico:** Includes crude purchased in Andrews, Crane, Crockett, Ector, Gaines, Glasscock, Howard, Reagan, Upton, Winkler, & Yoakum Counties, Texas; Lea County, N. M.

**Hawkins:** Includes crude purchased in Hawkins Field, Wood County, Texas.

**Conroe** ..... $1.43
**Tomball** ..... 1.40
**Van** ..... 1.08
**Talco** ..... 0.79

**East Texas & Flag Lake** ..... $1.25
**Flour Bluff, E. Flour Bluff** ..... 1.33
**Salt Flat, N. Salt Flat** ..... 1.14
**Darst Creek, Hilbig, Carroll** 1.14

**Clark, Zoboroski** ..... $1.14
**Alice, Benavides (N. Sweden), Sun** ..... 1.35
**Ben Bolt, Clark-Muil, Tom Graham** ..... 1.35
**Yates (Pecos)** ..... 0.95
**La Rosa** ..... 1.33

### MAGNOLIA PETROLEUM CO.

(May 21, '41)

**Panhandle, Tex.**—(July 9, '41)—Same as Humble except Magnolia begins with Below 29 at $0.91.

**West Texas**—In Crane, Upton, Howard, Glasscock, Mitchell, Winkler, Cochran, Hockley, Yoakum & Gaines Cos.—Same as Humble except Magnolia begins with Below 25 at $0.80.

**N. Mexico**—In Lea Co.—Same as Humble except Magnolia begins with Below 25 at $0.80 & ends with 36 & above at $1.04.

**Cass & Panola Cos., Tex.**—Below 25 at $0.88, plus 2c per degree of gravity to 40 & above at $1.20.
**Mirando, Tex.**—Same as Humble.

**East Texas** ..... $1.25
**Darst Creek** ..... 1.14
**Luling** ..... 1.05
**Talco** ..... .79
**Lytton Springs** ..... $1.17
**Cleveland-Liberty Co.** ..... 1.26
**Tomball** ..... 1.40

### SINCLAIR-PRAIRIE OIL MARKETING CO.

**Texas Panhandle**—(May 23, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.83.
**West Texas & New Mexico**—(May 30, '41)—Same as Humble except Sinclair-Prairie begins with Below 25 at $0.80.

**Texas Gulf Coast**—(May 21, '41)—Same as Humble.
**Mexia District, Texas**—(May 30, '41)—Same as Humble, East Central Texas, except Sinclair-Prairie also posts Below 25 at $0.95.

**East Texas**—(May 21, '41) ..... $1.25
**Long Lake, Texas**—(May 21, '41) ..... 1.23

### STANOLIND OIL PURCHASING CO.

(May 21, '41)

**Clinton, Tex.**—Same as Humble Tex. Gulf Coast except Stanolind begins with Below 21 at $1.08.

**Fairbanks, N. Houston & Rosslyn, Tex.**—Same as Humble Dickinson schedule.

**E. Texas** ..... $1.25
**Satsuma & Tomball, Tex.** $1.40

### STANOLIND OIL & GAS CO.

(May 21, '41)

**W. Beaumont & Spindletop** (Jefferson Co., Tex.) **& High Island** (Galveston Co., Tex.)—Same as Humble Tex. Gulf Coast.

**Hendrick & Henderson** (Winkler Co., Tex.)—Same as Humble Panhandle except Stanolind begins with Below 26 at $0.82.

### THE TEXAS CO.

(May 21, '41)

**Panhandle, Tex.**—Same as Humble except Texaco begins with 34-34.9 at $1.03.

**W. Texas & Lea Co., N. M.**—Same as Humbe except Texaco posts $0.78 for 23.9 & below and ends with 36 & above at $1.04.

**Texas Gulf Coast**—Same as Humble except Texaco ends with 34 & above at $1.36.

**Duval, Mirando, Tex.**—Same as Humble Mirando except Texaco ends with 28-28.9 at $1.21.

**Refugio, Tex.**—Same as Humble except Texaco ends with 28-28.9 at $1.26.

**East Texas** ..... $1.25
**Darst Creek, Tex.** 1.14
**Hockley & Cochran Cos., Tex.** ..... .87
**Cass Co., Tex.** ..... $1.20
**Conroe, Tex.** ..... 1.43

### SHELL OIL CO., INC.

(May 20, '41)

**West Texas & Lea Co., N. M.**—Same as Humble except Shell ends with 36 & above at $1.04.

**Fisher Co., Tex.**—Same as Humble W. Central Texas except Shell begins with Below 25 at $0.86.

**East Texas** ..... $1.25
**Livingston field, Polk Co., Tex.** 1.25
**Pecos Co., Tex., except Yates Shallow pool** ..... $0.95
**Pecos Co., Yates Shallow pool** ..... .82

### CONTINENTAL OIL CO.

**Carson & Hutchinson Cos., Tex.**—(July 9, '41)—Same as Humble Panhandle except Continental begins with Below 29 at $0.91.

**Mirando, Tex.**—(July 1, '41)—Same as Humble.
**Wade City & Clara Driscoll, Tex.**—(July 1, '41)—Same as Humble Refugio.

**Alfred & Magnolia City, Tex.**—(May 21, '41), $1.35.
**Eddy Co., N. M.**—(May 30, '41)—Same as Humble N. M. schedule except Continental begins with Below 29 at $0.88.

### PAN AMERICAN PRODUCTION CO.

(May 21, '41)

**Hastings & S. Houston, Tex.**—Same as Humble Tex. Gulf Coast except Pan Am. begins with Below 21 at $1.08.

**Gillock, Tex.**—Same as Humble Dickinson except Pan Am. begins with Below 21 at $0.95.

**East Texas** ..... $1.25
**Cayuga, Tex.** ..... .90

# CRUDE OIL PRICES

*Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates shown.*

## CALIFORNIA

**Posted by S. O. California, May 23, 1941**

*(All gravities above those quoted take highest price offered in that field)*

| Gravity | Signal Hill (Long Beach) | Wilmington | El Segundo | Seal Beach | Huntington Beach | Inglewood | Olinda Brea Canon | Athens-Rosecrans | Torrance | Richfield | Whittier East Coyote (La Habra) | Montebello | West Coyote Hills | Santa Fe Springs | Greeley, Canal, Wasco | Coles Levee | Mountain View | Elk Hills, Buena Vista Hills, Midway-Sunset, Lakeview Area | Lost Hills | Coalinga | Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9 | .... | $0.68 | .... | .... | $0.71 | .... | $0.70 | .... | $0.70 | $0.70 | $0.70 | $0.70 | .... | .... | .... | .... | .... | $0.73 | $0.73 | $0.73 | 14-14.9 |
| 15-15.9 | .... | .71 | .... | .... | .75 | $0.76 | .72 | .... | .72 | .71 | .72 | .72 | .... | .... | .... | .... | .... | .73 | .73 | .73 | 15-15.9 |
| 16-16.9 | .... | .74 | $0.79 | .... | .79 | .79 | .75 | .... | .74 | .73 | .75 | .75 | .... | .... | .... | .... | .... | .73 | .75 | .73 | 16-16.9 |
| 17-17.9 | .... | .78 | .82 | .... | .82 | .82 | .78 | .... | .77 | .76 | .78 | .78 | .... | .... | .... | .... | .... | .75 | .78 | .73 | 17-17.9 |
| 18-18.9 | $0.80 | .82 | .86 | .... | .86 | .85 | .81 | .... | .80 | .79 | .82 | .82 | .... | .... | .... | .... | .... | .78 | .81 | .73 | 18-18.9 |
| 19-19.9 | .84 | .86 | .90 | .... | .89 | .88 | .85 | .... | .83 | .82 | .85 | .87 | .... | .... | .... | .... | $0.73 | .81 | .84 | .75 | 19-19.9 |
| 20-20.9 | .88 | .90 | .94 | .... | .93 | .92 | .88 | .... | .86 | .85 | .89 | .90 | .... | .... | .... | .... | .76 | .85 | .87 | .77 | 20-20.9 |
| 21-21.9 | .92 | .94 | .98 | .... | .96 | .95 | .91 | .... | .89 | .89 | .92 | .94 | .... | .... | .... | .... | .79 | .90 | .90 | .80 | 21-21.9 |
| 22-22.9 | .96 | .98 | 1.02 | $0.88 | .99 | .98 | .95 | .... | .93 | .93 | .96 | .97 | .... | .... | .... | .... | .83 | .94 | .93 | .83 | 22-22.9 |
| 23-23.9 | 1.00 | 1.02 | 1.05 | .92 | 1.02 | 1.01 | .98 | .... | .97 | .98 | 1.00 | .91 | .... | .... | .... | .... | .87 | .99 | .96 | .86 | 23-23.9 |
| 24-24.9 | 1.03 | 1.06 | 1.07 | .97 | 1.05 | 1.04 | 1.01 | .... | 1.01 | 1.02 | 1.03 | .94 | $0.99 | .... | .... | .... | .90 | 1.03 | .99 | .89 | 24-24.9 |
| 25-25.9 | 1.07 | 1.09 | 1.10 | 1.01 | 1.08 | 1.07 | 1.04 | .... | 1.05 | 1.06 | 1.07 | .98 | 1.02 | .... | .... | .... | .94 | 1.07 | 1.01 | .92 | 25-25.9 |
| 26-26.9 | 1.11 | 1.12 | 1.12 | 1.06 | 1.11 | 1.10 | 1.08 | .... | 1.09 | 1.10 | 1.11 | 1.01 | 1.06 | .... | .... | .... | .97 | 1.11 | 1.04 | .95 | 26-26.9 |
| 27-27.9 | 1.15 | 1.15 | 1.15 | 1.10 | 1.14 | 1.14 | 1.11 | .... | 1.13 | .... | 1.15 | 1.05 | 1.10 | $1.04 | .... | .... | 1.01 | 1.15 | 1.07 | .98 | 27-27.9 |
| 28-28.9 | 1.18 | 1.18 | 1.17 | 1.15 | 1.17 | 1.17 | 1.14 | .... | 1.17 | .... | .... | 1.08 | 1.13 | 1.08 | .... | .... | 1.04 | 1.19 | 1.10 | 1.00 | 28-28.9 |
| 29-29.9 | 1.20 | 1.21 | .... | 1.19 | 1.20 | 1.20 | .... | $1.17 | .... | .... | .... | 1.12 | 1.17 | 1.12 | .... | .... | 1.07 | 1.24 | 1.13 | 1.02 | 29-29.9 |
| 30-30.9 | 1.23 | 1.24 | .... | .... | 1.23 | 1.22 | .... | 1.21 | .... | Elwood .... | .... | 1.15 | 1.21 | 1.15 | $1.01 | $1.09 | 1.10 | 1.28 | 1.16 | 1.04 | 30-30.9 |
| 31-31.9 | .... | .... | .... | .... | .... | 1.24 | .... | 1.25 | .... | Terrace .... | .... | 1.19 | 1.24 | 1.19 | 1.04 | 1.12 | 1.14 | .... | .... | 1.06 | 31-31.9 |
| 32-32.9 | .... | .... | .... | .... | .... | .... | .... | 1.29 | .... | F.o.b. Ship | .... | 1.23 | 1.28 | 1.23 | 1.07 | 1.14 | 1.17 | .... | .... | 1.09 | 32-32.9 |
| 33-33.9 | .... | .... | .... | .... | .... | .... | .... | 1.32 | .... | $1.22 | .... | 1.27 | .... | 1.26 | 1.10 | 1.17 | .... | .... | .... | 1.11 | 33-33.9 |
| 34-34.9 | Kettleman Hills | .... | .... | .... | .... | .... | .... | 1.36 | .... | 1.25 | .... | 1.31 | .... | 1.30 | 1.13 | 1.20 | .... | .... | .... | 1.13 | 34-34.9 |
| 35-35.9 | $1.23 | .... | .... | .... | .... | .... | .... | .... | .... | 1.28 | .... | 1.35 | .... | .... | 1.16 | 1.22 | .... | .... | .... | .... | 35-35.9 |
| 36-36.9 | 1.26 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.39 | .... | .... | 1.19 | 1.25 | .... | .... | .... | .... | 36-36.9 |
| 37-37.9 | 1.29 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.43 | .... | .... | 1.22 | .... | .... | .... | .... | .... | 37-37.9 |
| 38-38.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.47 | .... | .... | 1.25 | .... | .... | .... | .... | .... | 38-38.9 |
| 39-39.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.51 | .... | .... | .... | .... | .... | .... | .... | .... | 39-39.9 |
| 40-40.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.53 | .... | .... | .... | .... | .... | .... | .... | .... | 40-40.9 |

**Playa Del Rey:** (FOB Standard Pipe Line) 20-20.9, $0.80; 21-21.9, $0.84; 22-22.9, $0.87.
**Wheeler Ridge:** 22-22.9, $0.76; 23-23.9, $0.80; 24-24.9, $0.83.
**Newhall, Kern River, Kern Front, McKittrick & Round Mountain:** 14-14.9 $0.73.

## LOUISIANA-ARKANSAS

**Posted by S. O. Louisiana, May 22, '41**

| Gravity | Atlanta, Ark. et al. | Caddo, La. et al. | Rodessa, La. et al. | Bunkie, La. et al. | Darrow, La. et al. | University, La. (Baton Rouge) |
|---|---|---|---|---|---|---|
| 40 & above | $1.08 | $1.18 | $1.20 | $1.30 | $1.30 | .... |
| 39-39.9 | 1.06 | 1.16 | 1.18 | 1.28 | 1.28 | .... |
| 38-38.9 | 1.04 | 1.14 | 1.16 | 1.26 | 1.26 | .... |
| 37-37.9 | 1.02 | 1.12 | 1.14 | 1.24 | 1.24 | .... |
| 36-36.9 | 1.00 | 1.10 | 1.12 | 1.22 | 1.22 | .... |
| 35-35.9 | .98 | 1.08 | 1.10 | 1.20 | 1.20 | .... |
| 35 & above | .... | .... | .... | .... | .... | $1.36 |
| 34-34.9 | .96 | 1.06 | 1.08 | 1.18 | 1.18 | 1.34 |
| 33-33.9 | .94 | 1.04 | 1.06 | 1.16 | 1.16 | 1.32 |
| 32-32.9 | .92 | 1.02 | 1.04 | 1.14 | 1.14 | 1.30 |
| 31-31.9 | .90 | 1.00 | 1.02 | 1.12 | 1.12 | 1.28 |
| 30 & below | .... | .... | .... | .... | .... | 1.26 |
| 30-30.9 | .88 | .98 | 1.00 | 1.10 | 1.10 | .... |
| 29-29.9 | .85 | .96 | .98 | 1.08 | 1.08 | .... |
| 28-28.9 | .84 | .94 | .96 | 1.06 | 1.06 | .... |
| 27-27.9 | .82 | .92 | .94 | 1.04 | 1.04 | .... |
| 26-26.9 | .80 | .90 | .92 | 1.02 | 1.02 | .... |
| 25-25.9 | .78 | .88 | .90 | 1.00 | 1.00 | .... |
| Below 25 | .... | .86 | .88 | .98 | .... | .... |
| 24-24.9 | .76 | .... | .88 | .... | .98 | .... |
| 23-23.9 | .74 | .... | .86 | .... | .96 | .... |
| 22-22.9 | .72 | .... | .84 | .... | .94 | .... |
| 21-21.9 | .70 | .... | .82 | .... | .92 | .... |
| Below 21 | .68 | .... | .80 | .... | .90 | .... |

**Atlanta** schedule includes Buckner, Lewisville, Magnolia, Village & Schuler (Jones Sand), Ark.

**Caddo** schedule includes De Soto, Sabine, Fouke, Homer, Miller Co., Nebo & Sugar Creek.

**Rodessa** schedule includes Cotton Valley & Shreveport (Cross Lake) ending with Below 25 at $0.88; Anse La Butte (Aug. 1, '41).

**Bunkie** schedule includes Eola, Olla, & South Olla.

**Darrow** schedule includes Bayou Mallet, Choctaw, Jeanerette, Lirette, N. & S. Crowley, Port Allen, Port Barre, Potash, Roanoke, & St. Martinville.

**Big Creek, Dorcheat, McKamie Distillates** (Sour) ..... $1.15
**Heavy Smackover Crude** ..... .83
**Cotton Valley Distillate** ..... 1.40
**Cotton Valley** (Holloway Sand Crude) ..... 1.25
**Lisbon Distillate** ..... 1.20

*(Continued next column)*

## LOUISIANA-ARKANSAS (Cont'd)

**Posted by Shell Oil Co., Inc.** (May 20, '41)

| Gravity | Iowa | Roanoke | Gibson |
|---|---|---|---|
| Below 20 | $0.99 | $0.94 | $0.89 |
| 20-20.9 | 1.01 | .96 | .91 |
| 21-21.9 | 1.03 | .98 | .93 |
| 22-22.9 | 1.05 | 1.00 | .95 |
| 23-23.9 | 1.07 | 1.02 | .97 |
| 24-24.9 | 1.09 | 1.04 | .99 |
| 25-25.9 | 1.11 | 1.06 | 1.01 |
| 26-26.9 | 1.13 | 1.08 | 1.03 |
| 27-27.9 | 1.15 | 1.10 | 1.05 |
| 28-28.9 | 1.17 | 1.12 | 1.07 |
| 29-29.9 | 1.19 | 1.14 | 1.09 |
| 30-30.9 | 1.21 | 1.16 | 1.11 |
| 31-31.9 | 1.23 | 1.18 | 1.13 |
| 32-32.9 | 1.25 | 1.20 | 1.15 |
| 33-33.9 | 1.27 | 1.22 | 1.17 |
| 34 & above | 1.29 | 1.24 | 1.19 |

**Iowa** schedule includes Black Bayou & White Castle, La. fields.

**Roanoke** schedule includes Chalkley, La. field.

**Gibson** schedule includes S. Houma, Hester & W. Lake Verret, La. fields.

**Happytown** field, St. Martin Par., La. ..... $1.15

**Posted by Arkansas Fuel Oil Corp.**
Urania, La. (May 22, '41) ..... $1.15

**Posted by Continental Oil Co.** (May 21, '41)
Tepetate, La. ..... $1.18
Ville Platte, La. ..... 1.20
Lake Arthur, La. ..... 1.18

**Abbeville, La.**

| | | |
|---|---|---|
| Below 36 $1.07 | 37-37.9 $1.11 | 39-39.9 $1.15 |
| 36-36.9 1.09 | 38-38.9 1.13 | 40 & above 1.17 |

## CANADIAN FIELDS

**Posted by Imperial Oil Limited**
**Western Ontario** (Nov. 6, 1939)
Petrolia ..... $2.10 Oil Springs ..... $2.17

**Turner Valley Crude Oil (July 16, '41)**
(Prices FOB producer's tankage)

| | | |
|---|---|---|
| 33-33.9 $1.35 | 44-44.9 $1.57 | 55-55.9 $1.79 |
| 34-34.9 1.37 | 45-45.9 1.59 | 56-56.9 1.81 |
| 35-35.9 1.39 | 46-46.9 1.61 | 57-57.9 1.83 |
| 36-36.9 1.41 | 47-47.9 1.63 | 58-58.9 1.85 |
| 37-37.9 1.43 | 48-48.9 1.65 | 59-59.9 1.87 |
| 38-38.9 1.45 | 49-49.9 1.67 | 60-60.9 1.89 |
| 39-39.9 1.47 | 50-50.9 1.69 | 61-61.9 1.91 |
| 40-40.9 1.49 | 51-51.9 1.71 | 62-62.9 1.93 |
| 41-41.9 1.51 | 52-52.9 1.73 | 63-63.9 1.95 |
| 42-42.9 1.53 | 53-53.9 1.75 | 64 & over 1.97 |
| 43-43.9 1.55 | 54-54.9 1.77 | |

**Absorption Gasoline (July 16, '41)**
90% Rec., 20 lb. Reid v.p. ..... $2.28
90% Rec. 17 lb. Reid v.p. ..... 2.44

## ROCKY MOUNTAIN FIELDS

**Posted by Stanolind Oil & Gas Co.** (May 20, '41)

Salt Creek (except Tensleep crude), Midway & Dutton Creek, Wyo.

| | | |
|---|---|---|
| Below 29 $0.96 | 32-32.9 $1.04 | 36-36.9 $1.12 |
| 29-29.9 .98 | 33-33.9 1.06 | 37-37.9 1.14 |
| 30-30.9 1.00 | 34-34.9 1.08 | 38-38.9 1.16 |
| 31-31.9 1.02 | 35-35.9 1.10 | 39-39.9 1.18 |
| | | 40 & above 1.20 |

| Wyoming: | | Wyoming: | |
|---|---|---|---|
| Tensleep Crude | $0.6785 | Grass Creek Light | $1.00 |
| Frannie Light | .70 | Grass Creek Heavy | .50 |
| Frannie Heavy | .47 | Elk Basin | 1.00 |
| Hamilton Dome | .45 | Hes. Colo. | 1.07 |

**Posted by Ohio Oil Co.** (May 20, '41)
Elk Basin, Wyo. ..... $1.00
Grass Creek, Wyo., Light ..... 1.00
Rock Creek, Wyo. ..... 1.15
Lance Creek, Wyo., (July 1, '41) ..... 1.12

**Posted by Continental Oil Co.** (May 21, '41)
**Ft. Collins & Wellington, Col.**

| | | |
|---|---|---|
| Below 29 $0.96 | 32-32.9 $1.04 | 36-36.9 $1.12 |
| 29-29.9 .98 | 33-33.9 1.06 | 37-37.9 1.14 |
| 30-30.9 1.00 | 34-34.9 1.08 | 38-38.9 1.16 |
| 31-31.9 1.02 | 35-35.9 1.10 | 39-39.9 1.18 |
| | | 40 & above 1.20 |

| | | | |
|---|---|---|---|
| Canon City & Florence, Col. | $1.05 | Big Muddy, Wyo., (May 30, '41) | $1.08 |
| Creek, Mont. | 1.15 | Lance Creek, Wyo., (July 1, '41) | $1.12 |

# CLASSIFIED

*Address all Blind Box Number ads to National Petroleum News, 530 Penton Building, Cleveland, Ohio, unless otherwise specified.*

## Situation Open

Wanted: Supervisor, Lubricating Oil Department, Canadian Refinery.
Young man with technical education and practical experience in modern Lubricating Oil Refinery. State in first letter age, marital status, education, experience, Nationality, Religion, present occupation and salary, and references. Box No. 965.

## Positions Wanted

Marketing Executive, Twenty years experience in bulk and service station sales, automotive and industrial lubrication. Location and salary secondary. Box No. 963.

River terminal Superintendent. Executive experience. Age 35, married. Twelve years sales experience with Major Company. Thoroughly familiar with barge shipments and unloading. Locate anywhere. Box No. 966.

## Wanted to Buy

Cash paid for Gasoline Transport of around 3500 gallons. Must be in good condition and reasonable.

**BELL PETROLEUM CO.**
**1199 South Bradford St.**
**Gainesville, Ga.**

We are seeking to purchase several good trackside filling stations in Ohio, Indiana, Michigan, Kentucky, West Virginia or Western Pennsylvania. Must be in cities of 15,000 or over. Dealings with owner only—no agents. Information furnished will be treated in strictest confidence.

**Fair Price Stations, Inc.**
**Wooster, Ohio**

## For Sale

1940 Dodge tractor with 1235 gallon Heil semi trailer. Power take off for pump unloading. A bargain at $1000. Valley Oil Company, New Philadelphia, Ohio.

**Complete Pennsylvania Refinery. Two thousand barrel tube still, wax plant, filter house, tankage of all sizes. Available immediately. Complete or in part. Address Box No. 944, National Petroleum News.**

1500 gallon Columbia streamlined semi-trailer tank, curb delivery, barrel compartment side, 12 can racks on each side. Box No. 967.

Six compartment, thirty-four hundred gallon transport, Heil tank, Fruehauf trailer, new 975 x 20 tires. $1200.00. United Service Oil Co., 12606 Grand River, Detroit, Michigan.

## Classified Rates

"For Sale," "Wanted to buy," "Help Wanted," "Business Opportunities," "Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00 per insertion.

"Position Wanted"—5 cents a word Minimum charge $1.00 per insertion.

Advertisements set in special type or with border—$4.00 per column inch

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Witte Engine Works

# · PERSONALS ·

The odds are 10 to 1 that plenty of tall stories will be going the rounds of the eastern oil trade when **Chester Allen,** Warren, Pa., West Penn Oil Co., **Don Spagnogle,** Philadelphia, Atlantic Refining Co., **Wallace Burke,** New York, Socony-Vacuum, and **L. T. Morrow,** Detroit, Socony-Vacuum, return from their two-week fishing trip in New Brunswick, Canada.

* * *

**Petroleum Co-ordinator Harold L. Ickes** returned this week from a month's vacation in the West.

* * *

Tulsa's Chamber of Commerce has dusted off its "Welcome" mat, as it does for newcomers to the city, for **O. L. Ely,** who has moved here from Amarillo to take over the position of traffic manager for Anchor Petroleum Co. The veteran traffic authority spent 17 years with the W. T. Waggoner Estate and Waggoner Refining Co. as traffic manager. For the past 2 years he has been associated with Phillips Petroleum Co.

* * *

New vice-president in charge of engineering for Gulf Oil Corp. and Gulf Refining Co., is **Herbert Henderson,** Pittsburgh, formerly manager of Gulf's engineering department. Mr. Henderson joined Gulf in 1907 to organize the company's engineering department at Port Arthur, Tex. In 1928, this department was transferred to Pittsburgh, and Mr. Henderson continued in charge

**Lieut. Col. M. B. Chittick,** formerly of Pure Oil Co. and now with the Army's chemical warfare service, has been named a member of the War Department's liquid fuel and lubricants committee, which determines specifications for petroleum products used by the Army. **Capt. George H. Schoenbaum,** formerly of New Jersey Standard has been named executive secretary of this committee.

* * *

Says **W. A. Parker,** secretary of North Carolina Oil Jobbers Assn., in a letter to members: "If co-ordinators were co-operators instead of dictators, they might find more appreciators." Mr. Parker might have added: Any resemblance to a Washington co-ordinator was purely coincidental.

* * *

**A. B. Cobb,** Cut Bank, Mont., well-known producer who recently entered the refining, marketing and transportation branches through purchase of the Home Oil & Refining Co., Great Falls, Mont., was flown to a Great Falls hospital in mid-August for an emergency appendectomy.

* * *

**S. A. Hart,** Cleveland, in charge of furnace oil deliveries for Ohio Standard, a bicycle enthusiast, together with a friend also on vacation, pedaled around most of Lake Erie—from Cleveland to Buffalo and across Canada to Detroit. That distance, around 470 miles, took the pair 6 days. Time being short, they returned by boat.

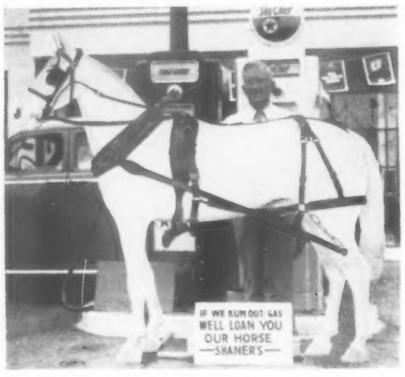
Mr. Hart says the use of bicycles is increasing rapidly in Canada, both for business and pleasure; that where a visitor formerly got an impression of how many people worked in a factory from the number of cars parked there, now the key is the number of bicycles.

* * *

**Dr. Alois Cibulka** of Baytown, Tex., has resigned as engineer for Humble Oil & Refining Co. to devote his time to writing technical literature. "I can't take my knowledge with me and I wanted to do something for America," he said. Dr. Cibulka graduated in engineering from the University of Prague and served with the Austrian and Czecho-Slovakian armies during World War I. He later came to Mexico on an oil construction job and joined the Humble staff in 1925.

Shaner as Fisherman

**Edgar M. Shaner,** an oil man who can catch a mean basketful of fish (see cut), rigged up an eye-catching cardboard horse for display on the pump island at one of the stations he owns in Lynchburg, Va., following curtailment of gasoline supplies to the East Coast area's service stations. "I got a hoss," he says, explaining, "Dictator Ickes will never stop Shaner."




Shaner as Oil Man

* * *

**Frank E. Spencer,** Chicago, president of Spencer Petroleum Co., will head the petroleum division in Chicago's 1941 Community Fund campaign. Headed last year by **R. L. Milligan,** assistant secretary-treasurer of The Pure Oil Co., the petroleum division contributed substantially to the Fund.

# Refining Technology

INCLUDING INTERNATIONAL PETROLEUM TECHNOLOGY

## Flexibility in Plant and Personnel Necessary To Meet Tomorrow's Operating Requirements

● One of the major policy problems before the refiner today is how he can prepare his equipment and personnel for the emergency period which is now upon us. How can he engender the proper mental viewpoint in his superintendent and technical personnel?

How can he prepare to adjust his present manufacturing methods to possible changes in market territories, transportation methods, products in demand, types of crude available? How can he maintain his plant time efficiency in the face of priorities on certain needed supplies? How may he determine how his contributions to national defense and his profits compare with those of other refiners?

The most important point in these problems is for the refiner to determine that his plant equipment and his methods of processing are sufficiently flexible to meet the rapidly changing demands of the present era, and that his profits are in line not only with today's conditions but considering also possible complex future operating requirements.

From the economic viewpoint it is well known that the average refiner normally should obtain 65% of his income from the sale of his most important product—gasoline. His gross refinery profit may be roughly indicated based upon an index equivalent to 70% of the refinery realization price of gasoline per barrel, minus the price of the delivered crude oil per bbl. As an example, this index today, based upon Group 3 prices, might be 40c per bbl., of 36° A.P.I. Mid-Continent crude, assuming 25c per bbl. crude delivery charges. This figure is approximately double what it was a year ago; but the refiner should remember he is operating in a much more uncertain period today and must prepare for higher taxes and uncertain future conditions.

In regard to the viewpoint of the superintendent and his technical personnel, they should consistently think in terms of prices and demand for products as affecting their method of processing. For example, a cracking unit may be designed and normally operated to produce a light residuum fuel oil during the summer and a coke residuum in the winter, to meet the seasonal demands and prices of both products. Today, when the price is up and demand for gasoline is good, the cracking unit may be operated for a high A.P.I. gravity residuum, in order to obtain the maximum gasoline output daily. Vice versa, with small fuel oil demand, a heavier residuum or coke should be produced to increase the gasoline yield. With alternating coke chambers no sacrifice in time efficiency may be incurred as compared with liquid residuum operation.

Primarily the price and demand for neutrals and bright stocks may change the operating methods for these products as well. As an example, the price of Penna. bright stock today averages 26.5c per gal., while 200 vis. neutrals of the same pour point average 35c per gal. The reverse is true in the Mid-Continent, where bright stock is 22c while the neutral is 14c. The superintendent in the Pennsylvania area might convert bright stocks into neutrals in existing, but perhaps obsolete, batch equipment whenever the price ratio between the two products is favorable.

The sale or refinery use of fuels permits another economic flexibility, which directs that today pulverized coal or coke might be used in existing furnaces rather than the fuel oil or gas previously burned. Many refiners strategically located with respect to fuel oil markets, are finding that such a policy not only represents a contribution to national defense but affords an appreciable reduction in refinery operating costs, if the therm value of coal or coke is below that of refinery fuels.

An example of this is contained in the latest issue of the *Lamp*, official publication of the Standard Oil Co. of New Jersey, which states that this company, by converting certain units of its Bayway refinery from fuel oil to coal, will be able to divert to other markets 1,000,000 bbls. of fuel oil per year.

A particular important phase of refinery flexibility today is the proper utilization of olefinic gases. Assuming the refinery is equipped with a catalytic polymerization unit, the product from which is normally blended into regular grade gasoline, may it not be advisable to revamp this unit for selected polymerization to isooctane or for alkylation? It is possible that the equipment in other parts of the refinery processes may be sufficiently flexible to allow the installation of a catalysis chamber to improve the quality or yields of the product.

If the refinery is strategically located so that the crudes available may be selected, all possible advantage should be taken of this flexibility. The demand for chemicals and higher octane number aviation fuels is constantly increasing, and these products can be obtained from certain crudes more profitably than from others.

The refinery executive might institute a program of reading by his operating and technical personnel so that they would keep abreast of the latest developments in the industry. This would be particularly useful for research men who often hide themselves behind their laboratory doors and become lost in the study of only their particular research projects.

There have been and will be many new processes installed in petroleum refineries this year. New processes should incorporate principles providing for a variety of charging stocks, and of products, and for control of capacity and yield, based upon the operating conditions and type of catalysts used. If these factors are not investigated the number of years before obsolescence is encountered may be short, in view of today's conditions.

## Debate Injection of 'Solid Fuels' vs. Carburetors in Plane Engines

The report, as yet unconfirmed and with details lacking, that a new type of 12-cylinder, liquid-cooled, solid fuel injection airplane engine is being tested at the Ford Motor Co.'s plant in Dearborn, Mich., has heightened interest of fuel technologists in this country in the controversy going on for some time in England, over the relative merits of airplane engines with carburetors and those where the fuel is injected as a liquid into the engine. The latter type calls for the use of the "high flash" fuels, sometimes erroneously referred to as "safety" fuels, boiling in the 300-400° F. range, on which some work has been done in this country.

No technical subject has aroused more controversy throughout the war, among air-engine experts, though very little concrete data has been revealed, stated the English journal, *Petroleum Times*, in a recent issue. It quotes Col. Moore-Brabazon, British Minister of Aircraft Production, as stating in Parliament: "We have adopted engines with carburetors, but the Germans, owing no doubt to the absence of good fuel, have adopted a fuel injection system rather like that of the Diesel engine.

"They have to be built to get very high indeed and, in order to get higher, you have to pump air through their engines. We now get our fighters from about 35,000 ft. up to 37,000 ft. and several over 40,000 ft. It is an advantage—I do not say that all fighters should—to have a squadron of fighters which can be sitting on top of the others, and this struggle for height is one which is reflected in my Ministry from the point of view of the technical side."

Commenting on the controversy in England, to the effect that the hotter the argument becomes, the more apparent it becomes that neither side will be able to convince the other, the *Petroleum Times* goes on:

"Some authorities go so far as to say that the German method is so much better that England is lagging behind in engine design and construction. In support of their statement they assert that the injection system is more economical in the expenditure of petrol; that it permits the use of lower grade fuel; that it improves the supercharging by which an aircraft can maintain power at great heights; that it is better for the aerobatics which form a normal part of fighter tactics; and that it prevents failure of the engine while functioning in extremely cold weather. They criticize the carburetor by saying that it is liable to freeze up and that if a pilot flies upside down, his engine stops because the carburetor has 'packed up.'

"The supporters of the British system do not agree. They point out that actual tests carried out by the Royal Aircraft Establishment on the Junkers Jumo 211D engines of a Heinkel 111K bomber disprove these claims.

"The tests are said to have shown that carburetors are actually more economical in the use of fuel, allow greater supercharger efficiency, and can use lower grades of fuel for the obvious reason that there are no complicated and smallbore pumps to be choked by impurities. The supporters of the carburetor maintain that even if the injection system gives some of the advantages claimed for it (which they deny most hotly) the simplicity and comparative cheapness of the carburetor and the question of maintenance make its use preferable in these days of high national expenditure and need for steady production of aero engines.

"No two sides could be further apart, but the fact that experienced engineers may be found in both camps suggests that there are things to be said for both. It is legitimate to point out, however, that the German method involves a considerably more complicated fuel system than the carburetor engine, since the fuel from the tanks is fed to the injection pump units by an engine-driven supply pump. The pressure needed to deliver this supply is between three and four times as high as the normal delivery pressure required by the carburetor. The system itself is also much heavier and must reduce the load of bombs that can be carried."

"Chemist, engineer and a master of philosophical living" . . . presented the ACS Priestley Medal for 1941

## Midgley Is Presented ACS Priestley Medal

Thomas Midgley, Jr., of Worthington, O., vice president of Ethyl Gasoline Corp., who discovered tetraethyl lead as an anti-knock agent in gasoline, was presented the Priestley Medal, highest honor the American Chemical Society bestows, at the 102nd meeting of the Society in Atlantic City, Sept. 8-12. He was honored for outstanding achievement in chemical science.

In accepting the medal, which is given once every 3 years, Dr. Midgley gave a demonstration of important industrial developments arising from research with which he has been associated.

With an actual gasoline engine, chemical apparatus, motion pictures and slides, he showed the effect of anti-knock material in a running engine, as it was presented at a meeting of the ACS in 1922. He demonstrated the non-toxic, non-inflammable properties of compounds containing fluorine and chlorine, the discovery of which has played an important part in commercial refrigeration and air-conditioning. These were first announced in 1930.

He also demonstrated the experiments, made in research on synthetic rubber, in the course of which it was discovered that rubber containing oxygen could be vulcanized by the addition of Grignard reagents. Early work in the destructive distillation of rubber was reported by Dr. Midgley in 1928. Presentation of a motion picture, first shown in 1934, describing the process of commercially extracting bromine from sea water closed the demonstration.

Dr. Midgley was stricken with infantile paralysis in 1940. Despite this disability he has carried on his activities, which are now more executive than in the reseach laboratory. He is also chairman of the board of directors of the American Chemical Society.

# New Laboratory Methods Indicate Service Properties of Lubricants

ATLANTIC CITY, Sept. 11

● Several new laboratory test methods to determine either the composition and properties, or the performance, of lubricating oils to meet present day requirements, were presented at the meetings here of the Petroleum Division of the American Chemical Society.

Seven of the 24 papers on the program were on the subject of lubricating oil testing.

A method was also presented for determining the decolorizing value of earth or montmorillinites, for refineries equipped with percolation or contact methods for lubricating oil treating. The evaluation requires actual percolation procedures on a small scale which duplicate larger operations in a refinery, and the method is said to have been in daily use in two independent laboratories for the past 5 years. Among other subjects presented before the Petroleum Division were fundamental studies on the composition of hydrocarbon gases and gasolines. These papers will be reviewed in the next issue of Refining Technology.

The lubricating oil test methods described in most cases represent analytical research projects that have been carried on in oil company research departments and are being used as standardized procedure in the laboratories of these companies. They include:

1—A method of laboratory test which will correlate with engine performance conditions, to predict the life of motor oils. The basic concept is the quantitative adjustment of the important factors influencing the oil deterioration to equivalent values in an engine.

2—A laboratory machine for investigating corrosion of bearings, which provides a correlation with service records.

3—A test method to measure the oxidation of an oil by means of its oxygen consumption.

4—A simple viscometer to measure kinematic viscosities by the use of water as a primary reference; usable in plant routine or research work.

5—A method to determine the per cent of organically combined phosphorus when used as an additive in lubricating oils.

6—A method for determining the aniline point in lubricating oils darker than 8 color.

7—A development of a method formerly used for rubber, for determining the content of free sulphur in lubricating oil.

Detailed description of these new lubricating oil test methods, as presented at the Petroleum Division meetings follows:

**1—"Laboratory Evaluation of Some Factors Causing Lubricating Oil Deterioration in Engines", by R. E. Burk, E. C. Hughes, W. E. Scovill and J. D. Bartleson, Standard Oil Co. of Ohio. Dr. Burk is manager of research and development and is also on the teaching staff of Western Reserve Univ.**

*(The following description of mechanical features and operation of the test are a portion of the paper under the above title.)*

● A schematic diagram of the apparatus used in this investigation is shown in Fig. 1. A 160 cc. oil sample is contained in a glass test tube (A) 45 mm. outside diameter and 37 cm. long. A sleeve (B) of thin walled cold-rolled steel 19 cm. long is closely fitted inside the glass tube. Another piece of steel tubing (c) 1.3 cm. O. D. by 1 cm. I.D. and 14 cm. long is centered in the glass tube. This is held in place by glass rings (D) attached to the glass air inlet tube (E). The air is discharged through a 2.0 mm. I.D. jet (F) the end of which is placed 0.65 cm. below the lower end of the center steel tube (C). A glass prong (G) on the air inlet tube positions the jet to this tube.

In the upper end of steel tube (C) a flat piece of copper or bearing metal (H) is inserted with ears to hold it in place.

The width of this piece is such that it fits snugly in the steel tube so that the flow of air and oil will pass evenly up both sides. The copper insert is usually 0.16 cm. thick, but the bearing metals generally include a steel

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**REFINING TECHNOLOGY**

**September 17, 1941**

**NEWLY ANNOUNCED TEST PROCEDURES INDICATE SERVICE PROPERTIES OF LUBRICATING OILS**

**Summaries of New Methods Presented at Meeting of Petroleum Division of the American Chemical Society**

Laboratory Procedure for Evaluating Some Factors Causing Deterioration of Lubricating Oil in Engines ..... R-291
Thrust Bearing Machine for Investigating Corrosion of Bearings ..... R-294
Measuring the Oxidation of an Oil by its Oxygen Consumption ..... R-296
Simple Viscometer to Measure Kinematic Viscosities ..... R-298
Method for Determining Per Cent of Organically Combined Phosphorus ..... R-300
Test for Determining Aniline Point of Oils Darker than 8 Color ..... R-302
Method for Determining Content of Free Sulfur in Lubricating Oils ..... R-302
Motor Fuel Gasoline Improved in Volatility as Well as Anti-Knock Ratings ..... R-304
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backing and are thicker. The length of this piece is adjusted to give the same ratio of surface area to volume of oil that exists in the engine with which the correlation is being attempted. In operation the air stream passing up through the steel tube, acts as an air lift and pumps the oil at the rate of about 1000-2000 cc. per minute. In this way a strong scrubbing action is exerted on the steel tube and copper or bearing insert.

Aluminum, copper and bearing metals may be introduced in several ways. Half-bearings may be hung between the center tube (C) and the sleeve (B) and the relative advantages of the two arrangements have not been fully determined. The apparatus is designed so that the metal pieces are completely immersed in the oil. The glass tube (A) is of sufficient length so that the oil does not splash out, and a plug of glass wool in the top further minimizes oil loss.

The assembly is placed in a hole in an aluminum block which is heated electrically, the temperature being thermostatically controlled. A hole depth of 15.4 cm. has been found sufficient to give a constant temperature over the length of the oil body. The aluminum block used in this investigation had 14 such holes, weighed 185 pounds and was 19 ins. long, 9⅝ ins. wide, and 11⅝ ins. high.

The test conditions have been varied but are currently:

| | |
|---|---|
| Temperature | 310° F. |
| Air Flow Rate | 30 liters per hour |
| Area of Steel | 3000 sq. cm. |
| Area of Copper | 20 sq. cm. |
| Time | In accordance with the objectives of the test. |

After the desired time, the following determinations are made:

1. The lacquer deposit is taken as the difference in weight of the center tube (C) after washing with light naphtha and after scrubbing with methyl ethyl ketone or $CHCl_3$.

2. The copper and bearing metal strips are cleaned thoroughly with methyl ethyl ketone or $CHCl_3$ and the change in weight during the test is determined.

3. On the used oil the usual tests may be carried out viz. viscosity, per cent naphtha insolubles, neutralization and saponification numbers, chloroform insolubles, Conradson carbon, etc.

4. The oil insoluble sludge remaining in the glass tube (A) and metal sleeve (B) may be rinsed out with naphtha, filtered and the weight determined.

Apparatus developed in research laboratory of Standard Oil Co. of Ohio for testing lubricating oil stability. The oil test assembly shown in Fig. 1 is placed in a hole in an aluminum block which is heated electrically, the temperature being thermostatically controlled

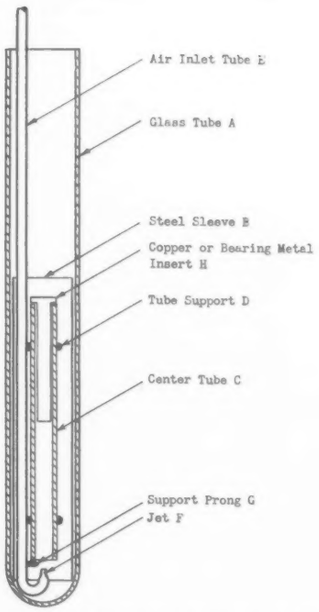


Fig. 1—Schematic diagram of oil test assembly

## Effect of Variables on the Construction And on the Operation of the Test

The variables considered were:

1. Area and composition of metal surfaces in contact with the oil.
2. Methods of contacting air, oil and metal surfaces.
3. Effect of blow-by materials and water in the air.
4. Rate of air-flow.
5. Temperature.
6. Time of operation.
7. Volume of oil.

The chief points presented showing the effect of the above variables on the construction and operation of the test are summarized as follows:

The accelerating effect due to the use of steel and copper as metals in various amounts is several times that of the oxidation in their absence in the case of uninhibited oils. Specific results produced by the use of other metals were shown:

Effect of different samples of road dirt were examined but were found to have little effect on rate of deterioration of the oil.

Rate of air flow in the test should be sufficient (a) to keep the oil saturated with air and (b) to provide a rapid flow of oil (by the air-life principle).

No general statement as to the effect of temperature in the range studied upon rate of deterioration can be made, i.e. some oils are very sensitive and others, particularly inhibited oils, are but little affected.

Since a large number of tests can be made at one time, it is not considered essential that the rate of deterioration be accelerated over that occurring in an engine. From the time standpoint, acceleration is hardly necessary since 66 2/3 hours at 60 m.p.h. will result in 4000 miles of use for an oil. Simplicity of the test enables its continuous supervision day and night, without supervision. It is considered preferable to choose as a time

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of operation the same length of time the oil would be run in a motor evaluation.

Volume of oil has been chosen at 160 cc. for ordinary work and 35 cc. for research samples available only in small lots.

Table 1 shows data obtained by this test and by the Standard Chevrolet motor test:

**Table 1—Correlation of Sohio Laboratory Test with Engine Operation**

**Engine: 1940 Chevrolet operated under Standard Motors conditions. Demerit rating 0 to 10, with 0 as best.**

| Oil Number | L | J | J | A-2 | H |
|---|---|---|---|---|---|
| Laboratory | ... | No. 1 | No. 2 | ... | ... |
| Engine Test Time, hours | 66⅔ | 31 | 66⅔ | 67 | 67 |
| Piston Skirt Rating | 1.75 | 6.2 | 4.42 | 5.1 | 0.6 |
| "Cold" Surface Rating | ... | 1.8 | ... | 0.7 | 1.05 |
| Cu-Pb Bearing | ... | ... | ... | ... | ... |
| Loss Mgs./10 sq. cm. | ... | 133 | ... | 18.2 | 282 |
| Used Oil Analysis | | | | | |
| 100° Viscosity Increase | 225 | 148 | ... | 182 | 241 |
| % Naphtha Insolubles | 2.2 | 3.0 | 2.76 | 1.3 | 2.0 |
| Acid Number | 6.9 | 6.75 | 9.2 | .84 | 3.5 |
| % Asphaltenes | 2.0 | 2.5 | 3.0 | 0.9 | 0.75 |
| Laboratory Test Number | 85-12 | 93-7 | 90-11 | 81-5 | 93-6 |
| Temperature, °F. | 310 | 310 | 330 | 310 | 310 |
| Time, hours | 65 | 65 | 65 | 65 | 65 |
| Air Rate, L/hour | 30 | 30 | 30 | 30 | 30 |
| Steel Area | 300 | 300 | 300 | 300 | 300 |
| Cu Area | 20 | 66 | 20 | 20 | 6.6 |
| Cu-Pb Area | 0 | 4.4* | 0 | 0 | 4.4* |
| Mgs. Lacquer per dec.² | 9.4 | 14.3 | 19.2 | 25.9 | 1.2 |
| Estimated Skirt Rating | 2.4 | 4.0 | 4.5 | 5 | 0.1 |
| Vis. at 100 Increase | 237 | 87 | 60 | 207 | 212 |
| % Naphtha Insolubles | 1.5 | 0.9 | 3.5 | 5.7 | 1.8 |
| Neutralization Number | 2.5 | 4.5 | 3.9 | ... | 2.4 |
| Cu Weight Loss, mgs. per 10 sq. cm. | 0.8 | 18. | 1.8 | 2. | 18 |
| Cu-Pb Weight Loss, mgs. per 10 sq. cm. | ... | 279* | ... | ... | 280* |
| Appearance Rating | B+ | C+ | C+ | B— | C— |

*Copper-lead bearing pieces cleaned at intervals during the test.

* * *

## 2—"A Laboratory Machine for Investigating Corrosion of Bearings", by S. K. Talley, R. G. Larsen and W. A. Webb, Shell Development Co., Emeryville, Cal.

*(The following description of the apparatus is a portion of the paper presented under the above title:)*

• A machine, simulating the important conditions of engine bearing corrosion on a small laboratory scale, was desired for studying the factors that control the appearance and extent of bearing corrosion, and also to form the basis of a standard test for the evaluation of oils in regard to bearing corrosion.

A study of results from current laboratory corrosion tests indicated that an essential condition for correspondence in degree and kind with corrosion experienced in an engine is a high rate of shear in the oil layers next to the bearing surface. Conditions leading to abrasion and to pounding, which may be important to the extent that they intensify the effects of corrosion in actual practice, are out of place in a corrosion test and must be eliminated or minimized.

Other features highly desirable in the design of a laboratory corrosion machine are simplicity, use of standard steel-backed bearing specimens, ease of thorough cleaning, minimum demands on the operator's time, adaptability to multiple set-up, reasonable cost and good control of experimental conditions of temperature, pressure, rate of shear and atmosphere. It is also desirable that required size of sample be not large, for convenience in the preparation of experimental oils, and also because samples of used oils from engine crankcases are usually limited in size.

Although engine tests must be used as a final criterion of bearing corrosion, they are not satisfactory for development, because they have insufficient reproducibility and afford no ready means of investigating or controlling the variables under examination; moreover, they require large samples of lubricants.

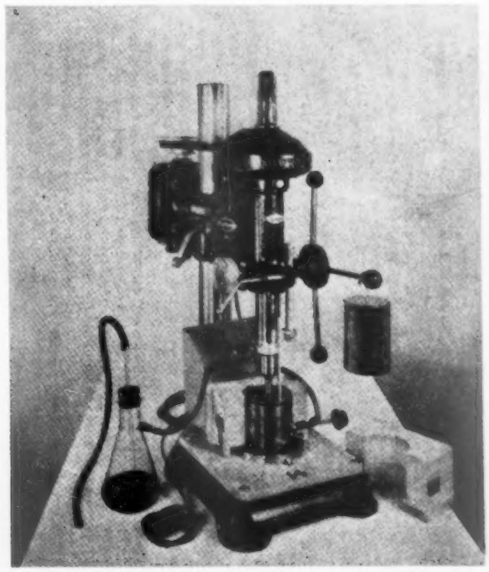
A machine has been designed to meet the outlined requirements and has been called the Thrust Bearing Corrosion Machine.

(The assembled machine with thermostatic control is shown in Figs. 1 and 2. It consists of a heavy, cold-rolled steel cup, in which a hardened steel disk is made to rotate against 3 flat bearing specimens. These are supported by a single ball bearing pivot and adjust their angle of tilt to give a lubricant wedge and provide essentially hydrodynamic lubrication.

The cup, which is fitted with a cover, is 2 ins. high inside and has an inside diameter of 2.5 ins. Heat is supplied by a 330 w Chromalox A-10 Ring Unit Heater set in a circular recess in the bottom of the cup. A Fenwal No. 732RC Cartridge Thermoswitch, which breaks the full heating current, is placed in a hole in the cup between the oil and heater sections.

The bearing specimens are ½ by ¾ in. and preferably cut from flat stock supplied by bearing metal manufacturers. Each bearing specimen is held in a steel cradle without a rigid clamping device. The steel bearing disk is 2 ins. in diameter by ¼ in. thick. The disk has a hardness greater than 300 Brinnell. The tip of the driving spindle is fibre.)

**Conditions of Testing**—The general conditions for a standard test (Table 1) were set to provide a test of reasonable length that would show a satisfactory response to corrosive conditions without incurring excessive oil oxidation. It was intended that corrosiveness be measured as independently as possible of all other factors; if the effects



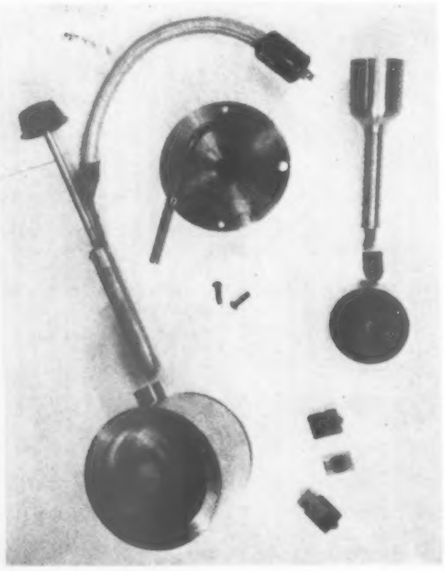


Fig. 1 (left)—Assembled thrust bearing corrosion machine

Fig. 2 (right)—Parts of the bearing corrosion machine

# *"Loss" pays a profit*

Refiners used to call it "gas loss" but now it pays a profit—that's the gas produced in cracking operations

They used to pipe it right from the cracking unit to a still or boiler furnace

It was mighty expensive fuel but refiners didn't know that till Universal brought out the catalytic poly process They know it now—it's being proved all over the world

Today, wise refiners run their cracked gas through a U. O. P. catalytic poly unit and get several gallons of 81-83 octane polymer gasoline from each 1000 cubic feet And they have about 70 per cent of the gas—stripped but still high in B.t.u. value—left for fuel

How much is 81-83 octane gasoline worth to you?

We'll be glad to tell you how much you can make from your cracked gas—by U. O. P. catalytic polymerization

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Dubbs Cracking Process
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on corrosion of oxidation of the oil under any particular conditions were desired, an entirely separate procedure could be added to cover such variation. Manipulative details have been fixed as required to secure the desired reproducibility.

**Table 1—Standard Conditions for Operation of Thrust Bearing Corrosion Machine**

| | |
|---|---|
| Duration of Run | 20 hours |
| Temperature | 225°F. (107°C.) |
| Oil Charge | 35 cc. |
| Thrust | approx. 125 pounds |
| (Weight on drill press arm | 5 kg.) |
| Speed | 2400 r.p.m. |
| Bearing Specimens | new Cu-Pb |
| Bearing Specimen Surface | Polished (No. 0000 Hubert) Slightly beveled edges |
| Bearing Specimen Thickness | All three specimens should agree in thickness to within 0.002 inches. |
| Bearing Specimen source | Cleveland Graphite Bronze Company |
| Steel Disk Hardness | 300 Brinnell (minimum) |
| Steel Disk Surface | Mirror finish |
| Air Rate | Approximately 5 cc./min. |

All bearing losses are reported as mg./sq.cm. Prior to weighings, bearings are cleaned by boiling for ten minutes in naphtha and in acetone.

Among the points brought out on test operating conditions were:

Requirements in preparing the surfaces of the bearing specimens and the steel disk were investigated with both corrosive and non-corrosive oils. Comparatively rough surfaces of the steel disk were used with corrosive oils and the greatest bearing loss was obtained with the roughest disk.

It was found both speed and pressure can be held within limits sufficiently close for satisfactory reproducibility. It is believed that, as long as hydronamic conditions of lubrication prevail, changes in speed and pressure are important only as they change the rate of shear in the oil layer.

Within the viscosity range of commercial lubricants, viscosity is not a factor in bearing corrosion as measured in the Thrust Bearing Corrosion Machine.

The machine was said to find its greatest usefulness when the corrosivity of oil is measured at different temperatures and considerable effort has been spent in examining the effect of this variable. On this point the paper stated:

"While in most cases a 20 hour test at the standard temperature of 107°C. involves only mild oxidation of an oil, higher temperatures may result in very extensive oxidation, especially when oxidation inhibitors are absent. For example, white oil is converted to a semi-solid mass in 20 hours at 180°C. with either Cu-Pb or cast iron bearing specimens. No attempt has been made to isolate the effect of oil oxidation as such at higher temperatures and attention is directed primarily to the bearing losses in a 20 hour test. Table 6 contains bearing loss data at different temperatures for a series of representative oils.

**"Table 6—Effect of Temperature on Corrosion**

| | 20 hr. run | | | 125 lb. Thrust | | | | 2400 r.p.m. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil | Bearing | 100°C. | 107°C. | 110°C. | 120°C. | 130°C. | 140°C. | 150°C. | 160°C. | 170°C. |
| A | Cu-Pb | ... | 0.3 | ... | ... | 0.2 | .... | .... | .... | .... |
| | | ... | 0.4 | ... | ... | 0.3 | .... | .... | .... | .... |
| B | Cu-Pb | ... | 0.4 | 0.1 | 0.6 | 0.1 | 33.5 | 44.7 | 42.8 | .... |
| | | ... | ... | ... | ... | 0.1 | 42.6 | .... | .... | .... |
| | | ... | ... | ... | ... | 0.2 | .... | .... | .... | .... |
| | | ... | ... | ... | ... | 0.0 | .... | .... | .... | .... |
| C | Cu-Pb | 0.1 | 0.1 | 0.1 | 11.1 | ... | .... | .... | .... | .... |
| | | .. | 0.2 | .. | 12.8 | .... | .... | .... | .... | .... |
| C | Cd-Ag | 0.0 | ... | 0.0 | 0.0 | 47.0 | 105.8 | .... | .... | .... |
| | | ... | ... | ... | 0.0 | 45.5 | 55.3 | .... | .... | .... |
| D | Cu-Pb | ... | 0.2 | ... | 0.1 | 1.3 | 9.6 | 9.2 | 8.0 | .... |
| | | ... | 0.1 | ... | 0.2 | 0.5 | .. | 10.5 | 6.6 | .... |
| D | Cd-Ag | .. | .. | ... | 0.0 | 0.1 | 5.4 | 0.3 | .... | .... |
| E | Cu-Pb | 0.2 | 0.6 | ... | 20.6 | 33.9 | .... | .... | .... | .... |
| | | ... | 0.5 | ... | 21.6 | ... | .... | .... | .... | .... |
| | | ... | 1.4 | ... | 14.8 | ... | .... | .... | .... | .... |
| | | ... | 0.3 | ... | ... | ... | .... | .... | .... | .... |
| F | Cu-Pb | ... | ... | ... | ... | ... | 0.1 | 1.4 | 24.2 | 23.9 |
| | | ... | ... | ... | .. | .. | .... | 6.1 | .... | .... |
| G | Cu-Pb | ... | ... | ... | 0.1 | 1.4 | 13.5 | .... | .... | .... |
| H | Cu-Pb | ... | ... | ... | .. | 0.0 | 0.1 | 0.1 | 0.1 | .... |
| I | Cu-Pb | ... | ... | ... | 0.2 | 1.4 | 0.9 | 1.2 | 0.7 | .... |
| | | ... | ... | ... | ... | 3.0 | 1.2 | 0.7 | .... | .... |

**"Evaluation of Results Obtained in the Thrust Bearing Corrosion Machine**—From the information in oils on which service records are available, general indications are that any oil showing a corrosion loss in a 20 hour Thrust Bearing Corrosion Test greater than 1 mg./sq. cm. should be regarded as potentially corrosive and those showing a corrosion loss of 5 mg./sq. cm. or more, very definitely corrosive. Losses 0.3 mg./cm.$^2$ or less are considered negligible under the conditions in which the test is carried out.

"The temperature has been shown to be very important in respect to the development of corrosiveness and should be considered in carrying the results of the laboratory test run into practice. Oils which are corrosive below 100° C. can be expected to give undue corrosion in engines.

"While the reproducibility of the Thrust Bearing Corrosion Test is good, it is desirable to make two tests to decide any particularly important point. When the corrosivity changes abruptly with temperature, the reproducibility in respect to the corrosion loss is poor because small differences in conditions make large differences in the result."

* * *

## 3—"Oxidation Characteristics of Pure Hydrocarbons", by R. G. Larsen, R. E. Thorpe and F. A. Armfield, Shell Development Co., Emeryville, Cal.

*(The following description of the apparatus and procedure for determining the volume of oxygen consumed in the process of oxidation of a lubricating oil, are portions of the paper presented under the above title.)*

• Most problems arising from the use of mineral oils in service are fundamentally problems related to oxidation of the oil. This is especially true for modern high output engines where the demand on fuels and lubricants is becoming more critical. The importance of the deterioration of lubricating oils in service is well recognized, and the susceptibility of an oil to this type of deterioration is measured by tests such as the Indiana or Sligh oxidation tests. Such conventional tests have been accepted, although somewhat reluctantly, as control tests for refining oils with regard to their oxidation stability.

There is increasing indication from experimental and service observations that attempts to refine oils drastically, for example, to obtain extremely favorable viscosity-temperature characteristics, have in some cases resulted in over-refining with respect to stability. In view of our limited knowledge of oil composition, it seems important that a clearer picture of "over-refining" be obtained. For years, refining as a process of lubricating oil manufacture has been directed toward the removal of "aromatics," paraffin wax, and asphalts.

Since it is not known what products are actually being removed, one is inclined to focus attention on what should remain to constitute a stable oil. For example, should aromatics be entirely absent? Apparently not, for aromatic-free medicinal white oil is extremely unstable. A need for a fundamental knowledge of the oxidation characteristics of various types of hydrocarbons thus becomes apparent. Certainly the long standing conceptions of stability need to be finally placed on a scientific basis. By establishing such a basis, a great gap in our knowledge of oil oxidation will have been filled.

Since deterioration by oxidation is essentially a reaction between organic materials and oxygen, the most general and simplest method of study is to determine the volume of oxygen consumed in the process. Such a study will give an unambiguous measure of the overall rate and extent of oxidation, regardless of the quantities of secondary oxidation products which appear.

While inherent oxidation is important, nevertheless, it the oxidation products formed do not deposit in the engine, or corrode bearings, or interfere with lubrication, then oxidation becomes a minor problem. While the ideal solution is to produce hydrocarbons resistant to attack, it may be that some oxidation is inevitable especially as some thermal decomposition is unavoidable. The ideal, then, should be to strive for high resistance to attack, and to limit deterioration to the production of harmless types of

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oxidation products. In practice the latter may even be more important than the former.

**Apparatus and Procedure**—The apparatus shown schematically in Fig. 12, consists essentially of a closed circulating system, capable of automatically recording the rate at which oxygen is consumed as it circulates through the heated hydrocarbon. The inlet to the reaction cell, which is heated in a thermostated oil bath, consists of a sintered glass thimble on the end of a pyrex tube and was found to produce excellent dispersion of the oxygen. The cold trap was held at 0°C. or slightly lower, (use of $CO_2$ or liquid air cooling required considerable attention and frequently led to plugged lines). The water and carbon dioxide absorbers form a path of about 36 cm. through which the circulating gases flow; found necessary to obtain efficient removal of these constituents of the gas stream.

Operation of the automatic dispensing reservoir is briefly as follows: When the confining liquid reaches the upper contact due to absorption of oxygen and reduction of pressure, a system of relays connects the reservoir to a low pressure oxygen supply until the liquid is forced to the lower contact, when the relay system again connects the dispensing reservoir with the oxidation system. Each time this cycle of operations occurs a mark is made on a small waxed time tape. By proper adjustment of the size of the sample or of the size of the reservoir, any desired number of points could be obtained on the curve relating time to volume of oxygen absorbed.

In operating the apparatus, the hydrocarbon is weighed into the reaction cell and then connected into the system. The system is immediately evacuated until the sample is brought to temperature at which time pure oxygen is run in. The evacuation and refilling is repeated three times. Circulation is then started and the test begun. Some of the reaction cells were equipped with sampling tubes so that periodic samples might be withdrawn for analysis.

Experience showed that rate of circulation is not an important variable if only slightly more than the volume of oxygen being absorbed is circulated. However, to insure an adequate supply, the rate of circulation was usually made at least ten times the rate of absorption.

In closed systems of this type there is an inevitable accumulation of gases which gradually dilute the oxygen; the chief constituents of the gas being light hydrocarbons, hydrogen, and carbon monoxide. Only in a few cases however, particularly among the saturated hydrocarbons (cetane and n-amyl cyclopentane were notable in this regard) did these gases affect the reaction rate providing that oxidation was not carried too far. In the cases cited above, the reactions were sharply interrupted by this accumulation but immediately resumed the usual rate when the system was evacuated and fresh oxygen added. The nature of the break indicated that the effect was not purely one of dilution.

* * *

## 4—"A Simple Viscometer for Research and Control", by Frank C. Croxton, Battelle Memorial Institute.

*(Description of a simplified instrument that may be used either in the laboratory or plant, for the determination of absolute viscosity.)*

"1) **Accuracy.** An improved viscometer should be capable of determinations as precise as obtainable with any of those recognized by A.S.T.M. Method D445-39T. It might suitably utilize the essential parts of one of the instruments described therein. It should be capable of still greater precision in research work where time may be of less importance than it is in control laboratories.

"2) **Speed.** It should be possible to measure viscosities rapidly. Furthermore, it should be possible to bring the equipment to proper temperature rapidly. Many of the smaller control laboratories operate only during the daytime and therefore it is of some value to them to be able to bring their viscometers to working temperatures within approximately 20 minutes.

"3) **Cost.** It is believed that many laboratories still using Saybolt viscometers would find it desirable to convert to capillary instruments in order to take advantage of their greater accuracy, if their price could be reduced. This, then, was considered to be an important requirement.

"4) **Flexibility.** This is also associated with speed. A single laboratory may have occasion to determine the viscosities of oils ranging from S.A.E. 10 to bright stocks at 210°F. and from Diesel fuels to S.A.E. 60 to 70 oils at 100°F. It should be possible to make any of these measurements with an efflux time of 100-600 seconds. Any change of capillaries to meet this requirement should be accomplished quickly.

"5) **Ruggedness.** A viscometer which is easily broken is of little use in the long run and may become expensive. It is not believed that glass instruments per se are fragile but their construction should be such that it will not be necessary to handle them often.

"To satisfy all of the above requirements, the vapor-type of thermostat, essentially as described by FitzSimons was used. This constant-temperature device has proved to be highly satisfactory, not only in research and in-

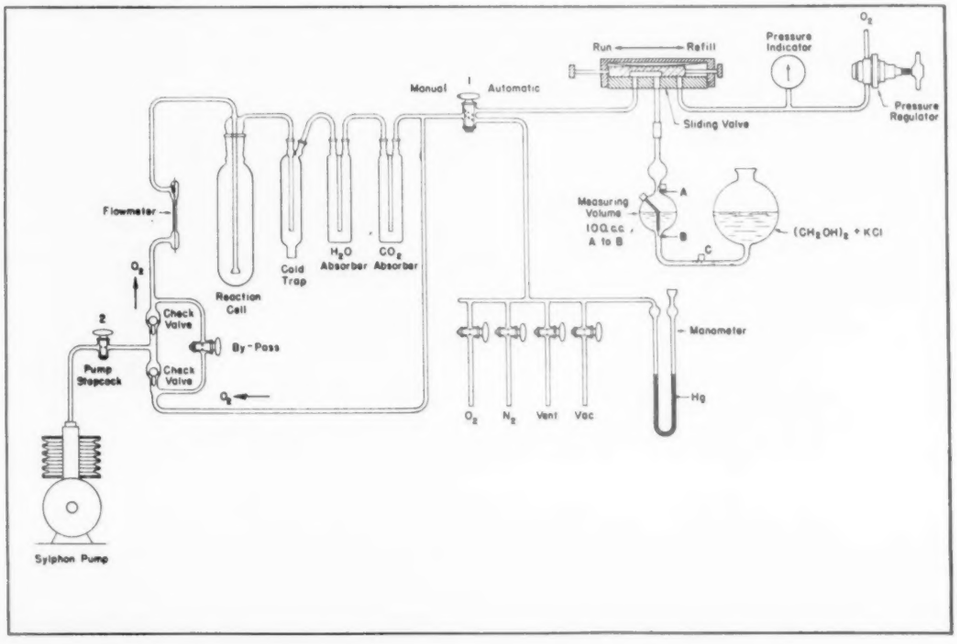


Fig. 12—Oil oxidation system flow diagram

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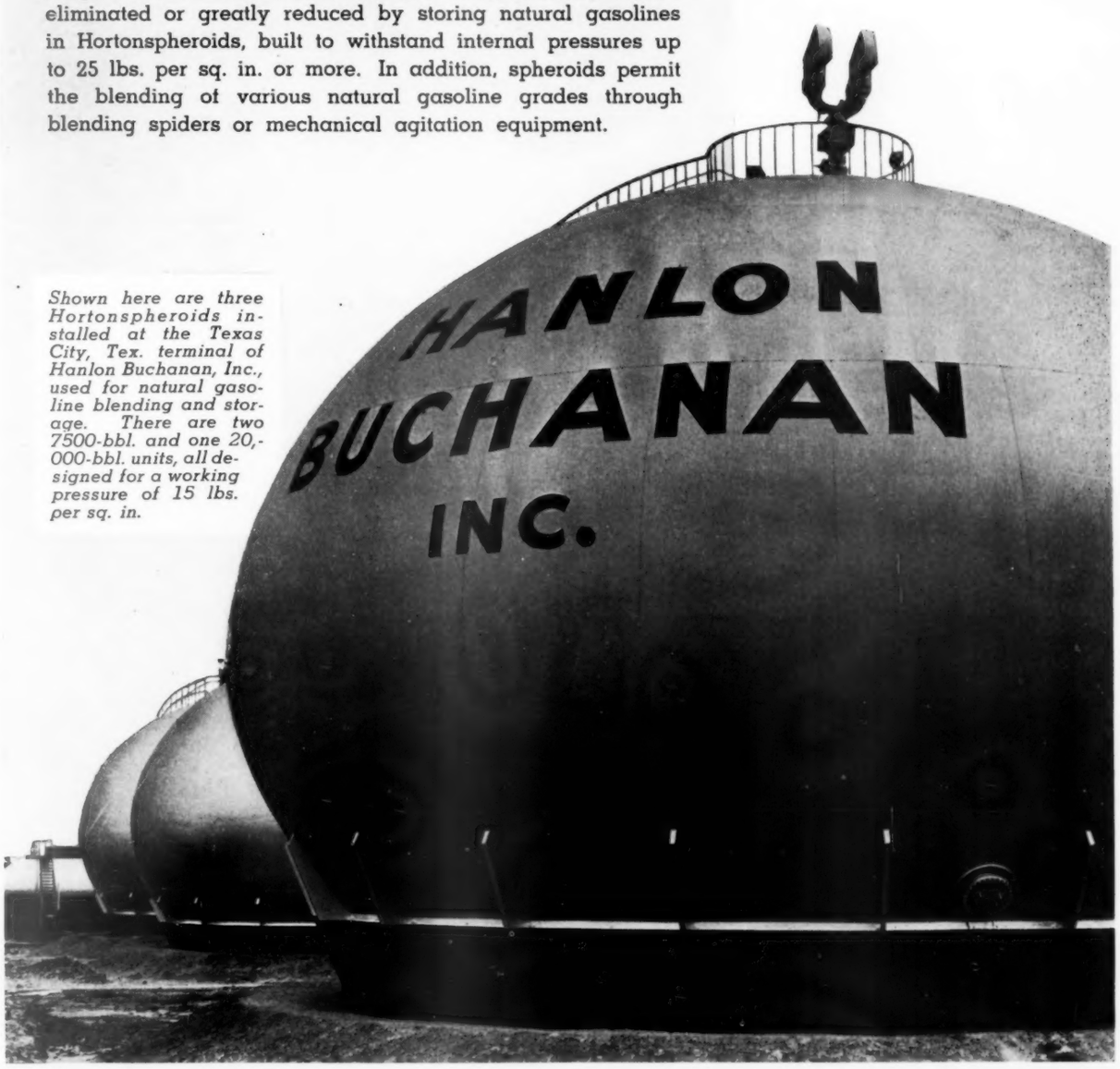


*Shown here are three Hortonspheroids installed at the Texas City, Tex. terminal of Hanlon Buchanan, Inc., used for natural gasoline blending and storage. There are two 7500-bbl. and one 20,000-bbl. units, all designed for a working pressure of 15 lbs. per sq. in.*

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spection laboratories but also in control rooms of process units where operators are enabled to check product quality at frequent intervals. The ability of this sort of thermostat to reach equilibrium temperature rapidly is often of considerable value. The absence of cyclical temperature changes is also an advantage. In these respects it differs radically from constant-temperature baths employing liquid media.

"The Zeitfuchs viscometer combines the advantages of simplicity, low cost and freedom from temperature corrections. It was therefore chosen as the actual measuring device. To allow rapid interchangeability of viscometer parts, particularly with different sizes of capillaries, these were mounted in the inner halves of 45/12 interchangeable ground joints, the outer half forming the top of the vapor jacket. Thus a change from one viscometer to another requires but a few seconds.

"The construction of the instrument is shown in Fig. 1. Each viscometer part, A, of whatever capillary bore, is constructed exactly according to the directions of Zeitfuchs and is sealed into the inner half of a 45/12 interchangeable ground joint, B, at such a point that the top of the overflow tip is about 2 cm. below the ground portion of the joint. The vapor thermostat consists of the jacket, C, with an outer half of a 45/12 joint at the top. Just above the enlarged portion at the bottom, a side arm joins the circulation tube, D, the lower end of which carries the liquid returning from condenser, E, to the main body of liquid, filling 0.5-0.7 of the enlarged portion of the jacket. The condenser is constructed preferably as shown, vapors being condensed in an annular space between cool surfaces. This is particularly important when operating at 100°F. with cooling water temperatures as high as 70-75°F. The pressure inside the thermostat is reduced and maintained constant by the method described by Fitz-Simons, connection being made to the top of the condenser.

"After filling the viscometer with the correct amount of liquid, viscosities are measured by merely noting the time required for the meniscus to fall from K to L. This, times the constant found in calibrating, less the kinetic energy correction, gives the kinematic viscosity of the liquid. Calibration is accomplished preferably by the use of water as a primary reference. Alternatively the viscosity standards of the A.P.I. or of the National Bureau of Standards may be used.

"The average control and inspection laboratory would probably set up two vapor thermostats for each inspector giving his full time to viscosity measurements. One of these would operate at 210°F., the other at 100°F. A series of viscometer parts would be available so that the viscosities of the various samples could be determined with an efflux time of 100-600 seconds, thus conserving the operator's time. If the viscosity at 210°F. of an S.A.E. 50 motor oil is required immediately after running an S.A.E. 10 oil, a quick change from a viscometer with a constant of approximately 0.025 to one with a constant of about 0.100 would provide efflux times of 150-200 seconds for each."

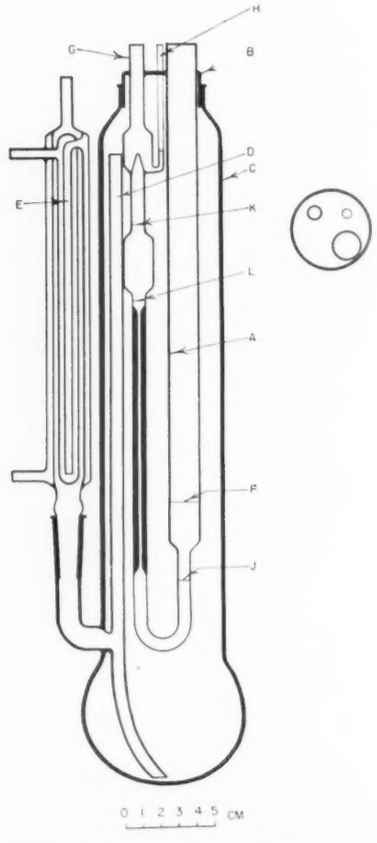


Fig. 1—Design of modified Zeitfuchs viscometer, to allow rapid interchangeability of parts

## 5—"Determination of Phosphorus in Lubricating Oils", by Harry Levin, F. P. Farrell and A. J. Millendorf, The Texas Co.

*(Proposed method for determination of the element phosphorus which may have been added in the form of an organic compound to a lubricant.)*

**Apparatus**—An International Size 2 centrifuge, special centrifuge tube, equipped with a capillary stem having a capacity of about 0.25 cc. The capillary has an inside diameter of approximately 2 mm., an inside length of about 4 cm. and has 7 graduations at each 0.030 cc. with subdivisions of 5 equal spaces.

Porcelain Dishes No. 3.

**Reagents**—Ammonium molybdate prepared as follows (13): Dissolve 90 grams of pure ammonium molybdate in 100 ml. of 6 N ammonium hydroxide plus sufficient water to effect solution, add 240 grams of ammonium nitrate and dilute to 1 liter.

Nitric acid, approximately 5N

Sodium naphthenate

**Procedure—New Oils**—Into a No. 3 porcelain dish weigh 5-50 grams* of sample, approximately 2.5 grams of sodium naphthenate and dilute to approximately 50 grams with ordinary phosphorus free mineral oil.

Heat to 150-160°C. and keep at that temperature for not less than 2 minutes while stirring with a thermometer. Wipe the bulb of the thermometer with a piece of filter paper and add it to the dish. Ignite and burn until volatile matter is gone and a small amount of carbon is left.

Allow the dish to cool and add 20 ml. of 5 N nitric acid. Boil gently for 5 minutes to convert pyrophosphates to orthophosphates and filter into a 100 cc. special centrifuge tube. Wash the dish, sediment and filter paper with 5 successive small washings of hot water. Care should be taken not to use too much liquid as the final volume must be 100 ml.

Bring the contents of the centrifuge tube to 50-55°C. by placing it in a water bath at that temperature. Add 10 ml. of ammonium molybdate reagent and stir for 5-10 minutes. Permit to cool and adjust the volume to 100 ml. by adding water.

Centrifuge for 10 minutes at 2000 r.p.m. If the volume of precipitate be difficult to read due to uneven surface, the surface should be stirred with a fine, clean platinum wire, and the tube recentrifuged for 1-2 minutes and the volume read.

The amount of phosphorus is determined by reference to the graph (Fig. 2) which was prepared from tests on known solutions of lecithin in oil and confirmed by

direct precipitation of standard solutions of disodium phosphate.

*(For used oils the procedure of test requires first that the sample be clarified by centrifuging.)*

* * *

## 6— "Determination of the Aniline Point of Dark Petroleum Oils", by Bruce B. Carr and M. S. Agruss, Pure Oil Co.

*(Following are portions taken from this paper.)*

• The American Society For Testing Materials has defined aniline point as the minimum equilibrium solution temperature for equal volumes of aniline and oil and has published a method for determining the aniline point by observing the temperature at which a 50/50 mixture of oil and aniline becomes turbid upon cooling. Since the use of the ASTM method is limited to oils of less than 8 ASTM color, we have developed a method for determining the aniline point of dark oils based on the visual observation of a thin film formed on the glass wall of our apparatus.

**Description of Apparatus**—The apparatus shown in Fig. 1 consists essentially of a double jacketed Pyrex test tube having a triple junction copper constantan thermocouple cemented to the inner wall of the tube. The aniline-oil mixture is stirred by swinging the apparatus back and forth over a small arc in such a manner that the contents run from one end of the tube to the other alternately covering and exposing the thermocouple attached to the wall of the tube.

This stirring action may be accomplished in a number of ways; the authors clamped the apparatus to a vertical arm which is pivoted at its lower end. The arm is moved back and forth about 25 times per minute by a slow speed motor geared down to this speed. A small 7 watt light and shield are clamped on the arm to illuminate the film, and the apparatus is heated by a bunsen burner which is also clamped on the oscillating arm. The temperature may be measured by any type of millivoltmeter or potentiometer which is calibrated to 0.1 millivolt in the range of 0 to 15 millivolts.

**Operation**—Three cc each of oil and aniline are pipetted into the inner test tube; the glass stopper is inserted and fastened by means of a rubber band. The apparatus is then clamped in a nearly horizontal position and the flame and stirring device started. As the mixture is heated the inner tube should be vented at least every 50°F. The aniline point is taken as the temperature at which a cloudy film first appears on the glass wall surrounding the thermocouple junctions as the mixture is cooled from above its solution temperature. The rate of cooling should be controlled as specified in the ASTM procedure; however, when using a millivoltmeter, which may be read instantly, instead of a potentiometer the rate of cooling was found to have very little effect. The apparatus may be easily cleaned by pouring a suitable solvent into the tube and evacuating into a trap through a small diameter glass tube. The oil sample and aniline should be prepared as described in the ASTM procedure.

*(This method of test is said to be applicable to black stocks such as No. 6 Fuel Oil and most still bottoms; however, in the case of heavy tars the film may not be translucent even after 50% dilution with aniline.)*

The simplicity in design and construction of the apparatus makes it available at very little cost to any laboratory which is equipped with the necessary millivoltmeter or potentiometer. In ease of operation and time consumed the method is comparable with the proposed ASTM method for light colored samples. The method is applicable to black stocks such as No. 6 Fuel Oil and most still bottoms; however, in the case of heavy tars the film may not be translucent even after 50% dilution with aniline.

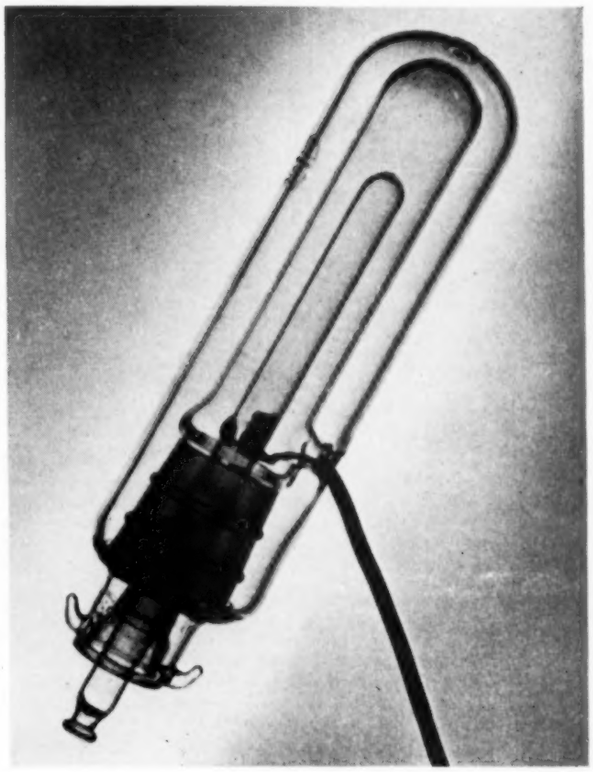

Fig. 1—Complete apparatus for determination of aniline point of dark oils

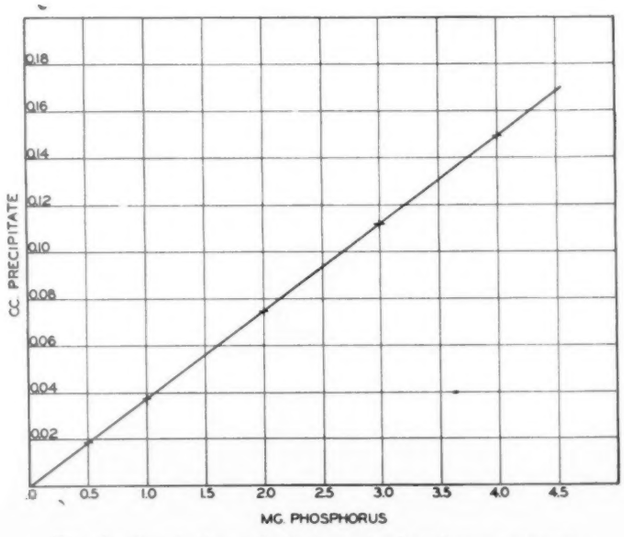


Fig. 2—Graph for calculation of phosphorus content

* * *

## 7— "Determination of Free Sulphur in Lubricating Oil", by Harry Levin and Ervin Stehr, The Texas Co.

*(A modification of a method previously used for the determination of free sulphur in rubber.)*

• Procedure—The sample is weighed into a 300 cc flask (A, Fig. 1). Fifty ml. of cp. benzene are added, agitating to dissolve the sample and 100 ml. of cp. acetone added. A piece of prepared copper gauze is added to the flask and the solution refluxed under a water cooled dispenser for two hours. The copper is then inspected (through the bottom of the flask) to detect discoloration. If there is no discoloration, the sample does not contain free sulphur. If there is darkening of the gauze, additional clean pieces are added and the heating repeated until the newly added copper is not discolored.

The liquid in the flask is removed through the filter stick and discarded. The residue in the flask is washed successively with benzene and acetone and the washings removed. The wad of glass wool is pushed from the filter stick into the flask (A) by means

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of a stiff iron wire and the filter stick added to the flask. The small amount of solvent adhering to the flask is removed by warming on a steam bath while introducing a gentle stream of nitrogen. The flask is then connected to the evolution apparatus (Fig. 2A).

30 ml. of cadmium chloride stock solution are diluted with distilled water to 160 ml. and 135 ml. of this solution placed in Flask B, the rest in test tube C. After adding 30 ml. of concentrated hydrochloric acid to the separatory funnel over flask A, nitrogen gas under low pressure (approx. 75mm. Hg) is passed into the separatory funnel, in a slow stream (3 bubbles per second) to displace the acid. Flask A is then heated gently until the acid begins to boil. The flame is removed and flask agitated for ½ min. to bring the acid in contact with all the copper sulfide in the flask. This is repeated 3 or 4 times, the continuous passage of the hydrogen serving to sweep out the hydrogen sulfide.

Titration of the sulfide is effected as follows: Flask B is removed from the apparatus and the delivery tube, attached to its neck, rinsed into the flask with a few ml. of dilute hydrochloric acid. Starch solution (2 ml.) is added, followed by 30 ml. of concentrated hydrochloric acid and the flask quickly stoppered. Flask B and contents are cooled by tap water, the stopcock of the attached separatory funnel being opened momentarily to equalize pressure, and 20 ml. of dilute cadmium chloride solution (stock solution diluted with 1 volume of water), added to the separatory funnel. The stopper on flask B is removed and a burette, with a rubber stopper attached to its tip, promptly inserted to make a tight connection at the neck of the flask. The stopcock of the separatory funnel is opened and standard iodine solution added from the burette while the flask is agitated. The gas displaced by the iodine solution passes through the separatory funnel where hydrogen sulfide is trapped.

When the solution turns blue, the addition of iodine is discontinued and the stopper attached to the burette loosened to permit the solution from the separatory funnel to enter the flask; the additional liberation of hydrogen sulfide thereby commonly discharging the blue color. The stopper of the burette is again inserted into the flask and the solution in test tube C introduced into the separatory funnel of flask B. Titration is continued to the blue end point and the separatory funnel drained as before. Finally the test tube is rinsed with dilute hydrochloric acid and water, the rinsings added to flask B through the separatory funnel and iodine reagent added dropwise to the usual blue end point. Sample knows are made by adding a benzene solution to elementary sulfur to one gram of oil known to be free of uncombined sulfur.

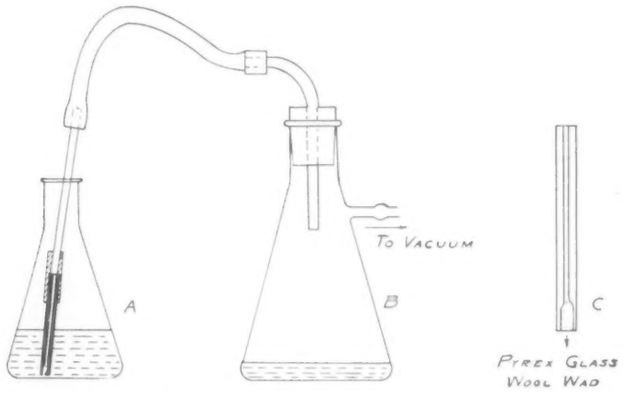



Fig. 1—Apparatus for removing solvent

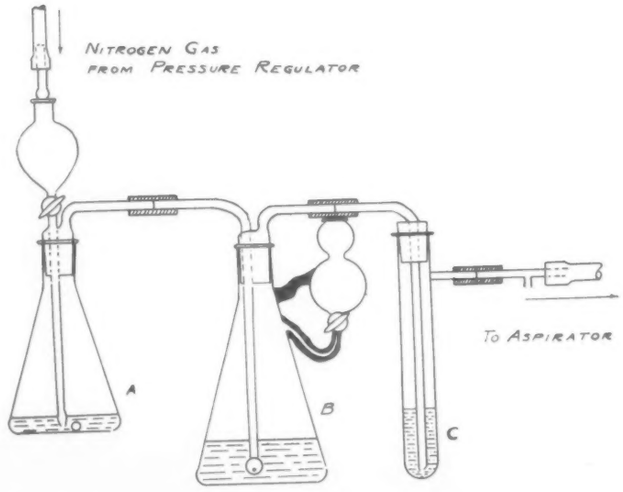



Fig. 2—Apparatus for liberating and determining hydrogen sulfide

# Motor Gasolines Improved in Volatility As Well as Anti-Knock Qualities

THE volatility and anti-knock properties of the 3 grades of winter motor gasolines sold in this country have improved materially the past few years, it is shown in the Cooperative Fuel Research Motor-Gasoline survey for the winter of 1940-41.* This improvement has been more marked in third-grade gasoline than in regular and premium grades.

The recent report being the 6th winter survey in the new series of motor gasoline studies, it is now possible to make a 5-year comparison of their average anti-knock and volatility qualities. See Table 1.

In this period (winter of 1935-36 to 1940-41) the average ASTM octane number of third grade gasoline increased 7.8 units from 57.8 to 65.6. In the same time, the average octane number of regular grade gasoline increased 4.8 units, to 74.4; while that of premium grade gasoline increased 3.4 units to 80.2.

In the winter of 1939-40, when new and improved motor fuels were being announced with much publicity and advertising by several companies, the octane number of third grade was 64.2, which was 3 units better than the previous winter. Octane number of regular gasoline was 72.7 that same winter, 1.6 units higher than the previous winter. The octane number of premium grade was 78.5 the 1939-40 winter, which was even a slight decrease from the previous winter. The average octane number of both premium and regular increased somewhat more this past winter, however, from that of 1939-40, than was the case with third grade.

The range between the average octane numbers of the three grades of motor gasoline sold in this country is becoming smaller; being 80.2, 74.4 and 65.6 respectively last winter, as against 76.8, 69.6 and 57.8 the winter of 1935-36.

Higher octane rating, however, is not the only indication of improvement in motor gasoline quality in recent years. There have been noticeable changes in both Reid vapor pressure and in the temperatures of the 10, 50 and 90% recovered points, which are indices of volatility, in this period of 6 winters.

**Table 1—Approximate Changes in Characteristics of Winter Gasolines Sold in the U. S., 1935-36 Through 1940-41**

*From data in Cooperative Fuel Research Motor-Gasoline Survey, of Bureau of Mines and Cooperative Fuel Research Committee*

| | 1935-36 | 1936-37 | 1937-38 | 1938-39 | 1939-40 | 1940-41 |
|---|---|---|---|---|---|---|
| **PREMIUM** | | | | | | |
| ASTM Octane No. | 76.8 | 77.5 | 78.1 | 78.8 | 78.5 | 80.2 |
| Reid VP, lb. per sq. in. | 9.0 | 9.0 | 9.8 | 9.6 | 9.7 | 10.1 |
| 10% Recovered, Temp. | 136 | 135 | 132 | 132 | 131 | 128 |
| 50% Recovered, Temp. | 224 | 226 | 229 | 225 | 222 | 218 |
| 90% Recovered, Temp. | 327 | 334 | 337 | 331 | 329 | 325 |
| **REGULAR** | | | | | | |
| ASTM Octane No. | 69.6 | 70.1 | 70.8 | 71.1 | 72.7 | 74.4 |
| Reid VP, lb. per sq. in. | 10.1 | 10.1 | 10.4 | 10.3 | 10.2 | 10.6 |
| 10% Recovered, Temp. | 130 | 130 | 128 | 128 | 128 | 125 |
| 50% Recovered, Temp. | 238 | 239 | 237 | 236 | 234 | 227 |
| 90% Recovered, Temp. | 353 | 352 | 352 | 352 | 349 | 343 |
| **THIRD GRADE** | | | | | | |
| ASTM Octane No. | 57.8 | 57.5 | 60.2 | 61.2 | 64.2 | 65.6 |
| Reid VP, lb. per sq. in. | 8.1 | 7.9 | 8.6 | 8.8 | 8.8 | 9.0 |
| 10% Recovered, Temp. | 144 | 143 | 140 | 140 | 139 | 136 |
| 50% Recovered, Temp. | 254 | 253 | 248 | 247 | 245 | 240 |
| 90% Recovered, Temp. | 364 | 360 | 356 | 357 | 354 | 345 |

There was a decrease in the average temperature at which the first 10% of third grade gasoline is recovered in a distillation test, of 8 degrees F., from 144 to 136; of 14 degrees, from 254 to 240, in the average temperature at which 50% is recovered; and of 19 degrees, from 364 to 345 F., in the temperature at which 90% is recovered.

The comparable decreases in recovery temperatures for regular grade motor gasoline were 5, 11 and 10 degrees; and for premium gasoline they were even less, 8, 6 and 2 degrees. The temperature at which the first 10% of third grade was recovered, average for last winter, was 136 F., the same as for premium grade the winter of 1935-36.

The average vapor pressure of third grade, in the same 6 year period, increased from 8.1 to 9 lbs.; that of regular increased from 10.1 to 10.6 lbs. and of premium gasoline from 9 to 10.1 lbs.

The range in octane numbers of motor gasoline sold last winter over the country was much greater for third grade and premium than for regular grade. Octane number of third grade varied from 56.1 to 71.3, a range of 15.2 units. Highest octane third grade sold was in the east, over 71 at some points; lowest was 56.1 in middle Rocky Mountain territory.

Octane number range for premium price gasoline sold last winter was 13.6 units, from a low of 78.8 to a high of 82.4. Highest octane premium gasoline was sold on the Pacific Coast, over 82; while in the east the range was from 80.4 to 80.8.

Range in octane rating of regular gasoline was only 3.4 units, from a low of 72.4 to high of 75.8. That sold in the east and at some points in the south was around 75.5, that in some sections of the Rockies and the Pacific Coast 72.7.

Sulfur content of regular grade gasoline sold last winter averaged .074%, it is shown in data from the co-operative survey. This was a considerable increase from the average sulfur content of regular gasoline of .053 reported for the previous winter. The increase is said to reflect the loosening of the maximum sulfur content requirement in some specifications, due to the recognition it has been held unnecessarily low as far as performance was required. The increase in sulfur content was much less in both premium and third grade in the 1940-41 winter, as compared with the previous winter.

Sulfur content of regular gasoline last winter ranged from .233% for that sold in San Francisco, to .039 for that sold in Tulsa.

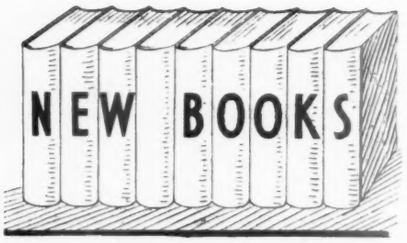
Sulfur content of premium grade sold last winter averaged .056%. That sold at some eastern points was .063 to .071. That sold in the far west was lower than average in sulfur content.

Volatility in the low distillation range was greater for regular grade gasoline sold last winter than for premium grade; but this was reversed to about the same extent in the higher temperatures of the distillation range. The average distillation range for regular grade was: 89 initial boiling point; 10% over at 125°F.; 20% over at 151°; 30% at 177°; 50% at 227°; 70% at 274°; 90% at 343° and 395°F. end point. The distillation range for premium grade was: 92°F. initial boiling point; 10% over at 128°F.; 20% over at 151°; 30% at 174°; 50% at 218°; 70% at 261°; 90% at 325° and 382° end point.

Average distillation range for third-grade was: 93°F. initial boiling point; 10% over at 136°F.; 20% at 166°; 30% at 193°; 50% at 240°; 70% at 282°; 90% at 345°; end point 398°.

This present report presents analytical data for 2020 samples, representing the products of approximately 120 companies, including both large and small suppliers. In addition, the Pacific Coast is represented by data averaged by the Pacific Coast Technical Group. As in previous surveys, the data was divided into 3 groups of samples of regular-price, premium-price and third-grade and each studied separately.

*"Cooperative Fuel Research Motor-Gasoline Survey, Winter 1940-41", by E. C. Lane, assistant petroleum chemist, U. S. Bureau of Mines. The eleventh in a series of co-operative reports on properties of commercial motor fuels made by the Cooperative Fuel Research Committee and the Bureau of Mines.




## "Inspection of Metals"

**By Harry B. Pulsiver**

Prepared to aid those engaged in the inspection of metals used in materials for national defense. It contains 173 pages, with a voluminous index, and the data given should be useful to refinery maintenance and test engineers.

The author is metallurgical engineer, American Metal Treating Co. and consulting metallurgist, Ferry Cap and Set Screw Co., Cleveland, and was formerly Assistant Professor of Metallurgy at Lehigh University. The book was published by American Society of Metals, Cleveland, and is available through the society at $1 with paper cover, $1.50 cloth cover, 25c additional for foreign postage.

* * *

## Welded Tubing Handbook

An 86-page Handbook of Welded Steel Tubing has been published by the Formed Steel Tube Institute, 1621 Euclid Ave., Cleveland, and is available at $1 in loose-leaf binding. Its purpose is to acquaint users with the properties of welded carbon and alloy steel tubing together with commercial tolerance limitation and extensive engineering data.

Although welded tubing has been in use for many years, it is pointed out that the advances which have been made in both production and fabrication methods in recent years have been to a large extent of such a specialized nature that they have escaped public attention. The methods of manufacture are described and illustrated.

* * *

## Refractory Standards

Refractory materials specifications, tests, definitions, and other related material have been brought up to date in the 1940-1941 edition of the "Manual of A.S.T.M. Standards on Refractory Materials" issued by the American Society for Testing Materials in a 180-page book to supersede the one published in 1937. Included in the new book is a recommended procedure for calculating heat losses through furnace walls.

One of the most valuable activities of the society's Committee C-8, which sponsors this manual, has been the development of industrial surveys of refractory service conditions. The 65 pages devoted to these surveys incorporate a great wealth of valuable technical information, the committee believes. Another feature of the compilation is information on standard samples of refractory materials, some eight standard samples being covered.

Copies are available from A.S.T.M. Headquarters, 260 S. Broad St., Philadelphia, $1.50 in board cover, $1.75 in cloth.

* * *

To keep its triennially published Book of Standards up-to-date, the American Society for Testing Materials, in the two intervening years, issues Supplements to each part of the book. The 1940 Supplement, recently issued, gives in the latest approved form, 292 specifications, tests, and definitions which were either issued for the first time in 1940 or revised.

Petroleum products are included in Part III, metals in Part I, and nonmetallic construction materials in Part II. Copies of these Supplements, bound in cloth, can be obtained from A.S.T.M. Headquarters, 260 S. Broad St., Philadelphia, Pa., at $3 for any one part, $5 for any two parts, and $7 for all three.

* * *

## Second Edition of Index On Spectrochemical Analysis

A second edition of the "Index to the Literature on Spectrochemical Analysis," covering 1920 through 1939, has been published by the American Society for Testing Materials. The 96-page volume contains 1467 references, an increase of 50% in the number in the first publication; many of the recently added ones covering improved descriptions of atomic spectra, studies of light sources and calibration processes and conditions influencing the accuracy of quantitative determinations.

This publication was compiled under the direction of W. F. Meggers and B. F. Scribner, of the Spectroscopy Section of the National Bureau of Standards. All papers are arranged in chronological order, and in alphabetical order of authors in each calendar year. All paper titles are given in English but book titles have been translated. Copies may be obtained from the American Society for Testing Materials, 260 Broad St., Philadelphia, at $1 per copy.

# New Patents

*Compiled by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh Street, NW, Washington, D. C., from whom copies may be obtained at rate of 25c each. State number of patent and name of inventor when ordering.*

**August 12, 1941**

**REFINING**

*Distillation of hydrocarbons*—William Mendius, Munster, Ind., assignor to Sinclair Refining Co. Filed May 11, 1938. No. 2,252,020.

*Production of heating oils*—George A. Lloyd, Jr., Elizabeth, and Eugene C. Hermann, Westfield, N. J., assignors to Standard Oil Development Co. Filed Mar. 7, 1939. No. 2,252,082.

*Fractional distillation*—Leslie B. Bragg, Scotch Plains, N. J., assignor to Foster Wheeler Corp. Filed Dec. 28, 1938. No. 2,252,550.

**MISCELLANEOUS**

*Stabilized hydrocarbon (lubricating) composition*—Carl F. Prutton, Cleveland Heights, Albert K. Smith, Shaker Heights, and Delton R. Frey, East Cleveland, Ohio, assignors to Lubri-Zol Corp. Filed Mar. 6, 1939. No. 2,251,953.

*Lubricant*—John G. McNab, Roselle, and Walter T. Watkins, Jr., Elizabeth, N. J., assignors to Standard Oil Development Co. Filed Sept. 20, 1938. No. 2,252,087.

*Motor fuel*—Pharis Miller, Elizabeth, N. J., assignor to Standard Oil Development Co. Filed Dec. 27, 1939. No. 2,252,089.

*Manufacture of aromatic nitrogen compounds*—Raphael Rosen, Elizabeth, N. J., assignor to Standard Oil Development Co. Filed Sept. 20, 1938. No. 2,252,099.

*Method and agent for breaking water-in-oil emulsions*—Bradshaw F. Armendt, Baytown, Tex., assignor to Standard Oil Development Co. Filed June 17, 1938. No. 2,252,110.

*Manufacturing asphalts*—Augustus N. Batchelder, Berkeley, Calif., assignor to Standard Oil Co. (Calif.) Filed Nov. 12, 1938. No. 2,252,111.

*Metal fabricating compound (oil)*—Arnold J. Morway, Roselle, and John C. Zimmer, Hillside, N. J., assignors to Standard Oil Development Co. Filed Nov. 12, 1937. No. 2,252,133.

*Process for production of thioethers*—John T. Rutherford, Berkeley, Calif., assignor to Standard Oil Co. (Calif.) Filed Jan. 21, 1941. No. 2,252,138.

*Coating composition*—Carl M. Hull, Chicago, Ill., assignor to Standard Oil Co. (Ind.) Filed Oct. 30, 1937. No. 2,252,485.

*Coating composition*—Maurice H. Arveson, Flossmoor, Ill., assignor to Standard Oil Co. (Ind.) Filed Oct. 30, 1937. No. 2,252,486.

*Metal salts of alkyl substituted hydroxyaromatic carboxylic acids, and alkyl substituted aryl metal hydroxylate and method of making it*—Orland M. Reiff, Woodbury, N. J., assignor to Socony-Vacuum Oil Co., Filed June 11 and July 2, 1938. Nos. 2,252,662 and 2,252,663.

*Alkyl substituted metal aryl hydroxylate-metal carboxylate salts and method of making them*—Orland M. Reiff, Woodbury, John J. Giammaria, Riverside, and Horace E. Redman, Woodbury, N. J., assignors to Socony-Vacuum Oil Co. Filed July 16, 1938. No. 2,252,664.

*Metal salts of alkyl substituted aryl ether acids and method of making them, and wax-substituted aryl ether acids and method of making same*—Orland M. Reiff, Woodbury, N. J., and Ferdinand P. Otto, Philadelphia, Pa., assignors to Socony-Vacuum Oil Co. Filed Aug. 17, 1938. No. 2,252,665 and 2,252,666.

*Lubrication*—Carl F. Prutton, Cleveland Heights, Ohio, assignor to Lubri-Zol Corp. Filed Mar. 23, 1938. No. 2,252,674.

*Stabilized hydrocarbon composition and stabilizing agent therefor*—Carl F. Prutton, Cleveland Heights, Albert K. Smith, Shaker Heights, and Delton R. Frey, East Cleveland, Ohio, assignors to Lubri-Zol Corp. Filed Mar. 6, 1939. No. 2,252,675.